



# Retinal imaging control software NM

(CR-1 Mark II)

## Operation Manual

Before using the instrument, be sure to read this manual thoroughly.  
Keep the manual where it is easily accessible.

# PLEASE NOTE

---

**1. For 110/120V countries:**

Computer and monitor used in the retinal imaging control software NM must be conforming to the IEC60601-1/UL60601-1 or IEC60950/UL60950. Be sure to also use an isolation transformer conforming to IEC60601-1/UL60601-1 when a computer or monitor conforming to IEC60950/UL60950 is used.

**For 220/230/240V countries:**

Computer and monitor used in the retinal imaging control software NM must be conforming to the IEC60601-1/UL60601-1.

2. Reading of image and storage of data must be performed in accordance with the law of the country where the product is being used. Also, the user is responsible for maintaining the privacy of image data.
3. In no event will Canon be liable for direct or indirect consequential damage arising out of the use of this product.  
Canon will not be liable for loss of image data due to any reason.
4. Before installing this product, you must read through the license agreement covering the terms and conditions under which the software is to be used.
5. Please ask the distributor or Canon representative where you made the purchase to install this product.
6. Canon reserves the right to change the specifications and other aspects of this product without prior notice.

- Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Other systems and product names in this manual are the trademarks of each manufacturer that developed them.

---

© CANON INC. 2009

All rights reserved.

Under copyright laws, this manual may not be copied, in whole or in part, without the written consent of Canon.

# Contents

---

1. Introduction .....	1
1.1 Overview of software .....	1
1.2 Software operating environment .....	2
2. Notes on use.....	3
2.1 Software .....	3
2.2 Digital camera settings .....	5
2.3 CF cards .....	6
3. Starting up and exiting the software .....	7
3.1 Starting up the software and logging in .....	7
3.2 Exiting the software .....	8
4. Performing studies.....	9
4.1 Displaying the main screen .....	9
4.2 Inputting the study .....	10
4.2.1 Methods of inputting the study .....	10
4.2.2 Manual input .....	11
4.2.3 Magnetic card/barcode input .....	13
4.2.4 List input .....	16
4.2.5 Worklist input .....	19
4.3 Starting a study without opening the Study Input screen .....	22
4.4 Taking images .....	23
4.5 Ending a study and transferring images .....	25
4.5.1 Ending a study .....	25
4.5.2 Checking the transfer status .....	27
4.5.3 When a transfer error occurs .....	28
4.6 Logging off .....	29
5. Operations on study logs .....	31
5.1 Temporarily saved study logs .....	31
5.1.1 Displaying list of temporarily saved study logs .....	31
5.1.2 Searching for studies .....	32
5.1.3 Transferring studies .....	33
5.1.3.1 Selecting studies for transfer .....	33
5.1.3.2 Transferring all studies .....	34
5.1.4 Saving studies .....	35
5.1.5 Deleting studies .....	36
5.1.6 Setting the display items .....	36
5.2 Study log file .....	37
5.2.1 Displaying study log files list .....	37
5.2.2 Deleting study logs .....	37

---

5.3 Study log screens .....	38
5.3.1 Displaying a study log screen .....	38
5.3.2 Changing study .....	39
5.3.3 Study log screen and photography .....	39
5.3.4 Exiting the study log screen .....	40
5.3.4.1 Transferring the study and exiting the study log screen .....	40
5.3.4.2 Exiting the study log screen .....	40
<b>6. Main screen operations .....</b>	<b>41</b>
6.1 Main screen .....	41
6.1.1 Toolbar .....	41
6.1.2 Display information .....	42
6.1.3 Menu bar .....	43
6.2 Image display methods and properties .....	44
6.2.1 Selecting the display method .....	44
6.2.2 Referencing the image properties .....	45
6.3 Image operations .....	48
6.3.1 Zooming .....	48
6.3.2 RGB channel view .....	49
6.3.3 Contrast/brightness adjustment .....	50
6.3.4 Enlarging an area of the image (Loupe) .....	51
6.3.5 Moving the displayed area .....	51
6.4 Comparing studies .....	52
6.4.1 Image display icon .....	53
6.4.2 Displayed item setting .....	53
6.5 Measuring C/D ratio .....	54
6.5.1 Displaying the C/D ratio enlarge screen .....	54
6.5.2 Measuring area ratio .....	55
6.5.3 Measuring the line ratio .....	57
6.6 Stereo view .....	58
6.7 Printing images .....	60
6.7.1 Adjusting the printing parameters .....	60
6.7.2 Using simple printing to print images .....	61
6.7.3 Using Easy-PhotoPrint EX to print images .....	63
6.8 QA .....	65
6.9 Rejecting images .....	67
6.10 Changing the patient information .....	68
6.11 Saving as JPEG files .....	69
6.11.1 Save as .....	69
6.11.2 JPEG settings .....	70
6.12 Changing the password .....	71
6.13 Displaying the version information .....	72

---

<b>7. Settings</b> .....	<b>73</b>
7.1 Settings Menu screen .....	73
7.2 System .....	74
7.2.1 System tab .....	74
7.2.2 Transfer Timing tab .....	75
7.2.3 Specific Character Set tab .....	76
7.3 Device .....	77
7.3.1 Retinal Camera Settings .....	77
7.3.2 EOS Settings .....	78
7.4 Study Management .....	80
7.5 Study Input .....	82
7.5.1 Module Settings tab .....	82
7.5.2 Manual Input tab .....	83
7.5.3 Mag Barcode Input tab .....	86
7.5.4 List Input tab .....	86
7.5.5 Worklist tab .....	88
7.5.5.1 Setting the display items .....	88
7.5.5.2 Performing the Worklist Server Settings .....	88
7.5.5.3 Setting the search conditions .....	89
7.5.6 MPPS tab .....	91
7.6 Storage .....	92
7.6.1 Registering the storages .....	92
7.6.2 Advanced export settings (when Export is selected for the storages) .....	95
7.6.3 Setting the storage server .....	96
7.6.4 Changing the registered information .....	96
7.6.5 Deleting storages .....	96
7.7 DICOM Tag .....	97
7.7.1 Study tab .....	97
7.7.1.1 Setting image comments .....	98
7.7.2 Study Logs tab .....	99
7.8 User Accounts .....	100
7.8.1 Registering users .....	100
7.8.2 Changing the user information .....	101
7.8.3 Deleting the user information .....	101
7.8.4 Resetting the password .....	101
7.9 Screen .....	102
7.9.1 Main Image Info. tab .....	102
7.9.2 Thumbnail Image Info. tab .....	103
7.9.3 Study Info. tab .....	104
7.9.4 Thumbnail Order tab .....	105
7.9.5 Loupe tab .....	106
7.9.6 C/D Ratio tab .....	107
7.9.7 Stereo View tab .....	108
7.10 Print .....	109
7.11 Study Logs .....	110
7.12 Magnetic Card/Bar Code .....	110

8. Before calling the service technician .....	111
8.1 Appearance of the message screen .....	111
8.2 Error .....	112
8.3 Warning .....	116
8.4 Information .....	125
Index .....	127

# NOTATION

---

## Notation 1

Button names are indicated by [ ].

Notation example: Click [OK].

## Notation 2

Available options in the taskbar or menu bar are indicated by [ ], and when options are selected in submenus, the order of selection is indicated by >. The available shortcut keys are displayed after the option in the menu bar.

Notation example: Click the commands from the taskbar in the following order.

[Start] > [All Programs] > [Canon Retinal imaging control software NM] >  
[Canon CR-1 Mark II]

[Study] > [Skip Study Input F5]

## Notation 3

For check boxes,  indicates a checked option, and  indicates an unchecked option.

Notation example: When this is checked, a Warning screen will be displayed when the amount of free space on the hard disk has fallen below the setting.

## Notation 4

For radio buttons,  indicates a selected option, and  indicates an unselected option.

Notation example: Select Manual or By User Defined Code.

## Notation 5

If an operating procedure or description in a section continues from an odd-numbered page to an even-numbered page, "Continued on the following page>>" is written at the bottom right of the odd-numbered page.

## Notation 6

If a detailed explanation for the operation or setting is available on another page, the notation (see page number) is used to refer to this page.

Notation example: 1. End the study. (see page 25)





# 1. Introduction

---

## 1.1 Overview of software

This software is used when taking retinal images with Canon Digital Retinal Camera CR-1 Mark II, and it enables the images taken to be browsed, operated, processed, stored, sent to DICOM storage server, exported as DICOM or JPEG format file and, output to a printer.

This software provides SCU functions of the Modality Worklist Management Service Class, Modality Performed Procedure Step Service Class and DICOM Storage Service Class in compliance with the DICOM standards.

This software enables connection to an HIS, RIS or other system, and worklists can be obtained to input study.

This software enables searches and studies using list input and using input from magnetic cards/barcode readers.

When a study is completed, the image data, study information and patient information are saved in the database managed by this software. Studies saved in the database can be saved to any user-selected storage. Studies from this location can also be viewed.

When images are output to the DICOM server or exported DICOM format file, DICOM format images are created with the information stored in the database.

C/D ratio measurement, stereo view, and other operations are available for enabling easy diagnosis of images.

## 1.2 Software operating environment

For details on the system, contact a Canon representative or distributor.

Hardware or software	Specifications
CPU	Core 2 Duo 2 GHz or higher
RAM	2 GB or more
Display	Screen resolution: XGA (1024 × 768 pixels) or higher WXGA (1280 × 800 pixels) or higher recommended
	Screen colors: 24 bits or more
Keyboard	
Mouse	Microsoft Mouse or compatible mouse
Interface	USB2.0 (for communication with digital camera)
	USB1.1 (for communication with retinal camera: emulating RS-232C)
	RS-232C (for the magnetic card/barcode reader)
Operating system	Microsoft Windows XP Professional SP2/SP3 [US]* Microsoft Windows Vista Business SP1 [US]* * This software does not support x64 (64-bit version).
Software	Microsoft .NET Framework Version 3.5
	SQL Server 2005 Express Edition SP2
	Canon Easy-PhotoPrint EX Version 2.0.0 or later (for printing the images)
Compatible EOS	EOS 50D

## 2. Notes on use

---

### 2.1 Software

- (1) This software can only be used by users who belong either of the following groups of the User Accounts.  
Windows XP: Administrators  
Windows Vista: Users (Standard user) or Administrators

- (2) Be sure to set the access rights for the saving folder to be used in the following cases.
- When exporting files to the Storage Types of the Export (DICOM) or Export (JPEG)
  - When changing the saving directory for the study management to a folder other than the default folder (Installation folder\Database\Images)
  - When saving the temporarily saved study logs
  - When using a study file for list input (such as ccrhis.his)

In the Security tab under Folder Properties, set Allow for Modify in the Users group and Allow for Full Control in the Administrators group.

- (3) Please use care with the following when saving the temporarily saved study logs or viewing the study log files.
- To specify a folder on the network, get the access rights to the folder as the Windows login user. For details on the access rights on the network, contact the system administrator.
  - Do not set the password on the removable media (CD, DVD or flash drive etc.).
- (4) Do not use the “Switch User” (where the user is switched without logging off) function in Windows. When multiple users are using the software, be sure to select “Log Off” in Log Off Windows, and then log in again as a different user.
- (5) Do not attempt to change the OS settings (such as screen resolution, date format, date, or language) while the application is running. If changes are made while the application is running, it may not function properly.
- (6) When using this software, make the Screen saver and Power Options settings as shown below.

Windows XP:

Screen saver	None
Turn off monitor	Never
Turn off hard disks	Never
System standby	Never
When I press the power button on my computer	Shut down
Enable hibernation	Disable

Continued on the following page >>

Windows Vista:

Screen Saver	None
Turn off the display	Never
Put the computer to sleep	Never
Turn off hard disks	Never
When I press the power button	Shut down
Start menu power button	Shut down

Also, during the Windows shut down process, do not perform any of the following operations.

Windows XP: Standby

Windows Vista: Sleep

- (7) Do not operate the retinal camera while operating this software. The software and camera may fail to operate properly.
- (8) After taking the image, do not operate the software until importing of the image is completed. Otherwise, it may not function properly.
- (9) Check cable connections if a communication error with the retinal camera occurs. Restart the computer if the communication error still occurs even after all cable connections have been checked.
- (10) If an application error is displayed during a study, turn the retinal camera and digital camera off and then on again, and restart the PC.  
In this case, perform the procedure below.
  - 1) Turn off the retinal camera and digital camera.
  - 2) Turn off the PC.
  - 3) Turn on the PC.
  - 4) After the OS is started, turn on the retinal camera and digital camera.
- (11) While images are being transferred from the digital camera, do not turn off the retinal camera or disconnect the DC coupler of the digital camera and the cables between the PC and retinal camera.
- (12) If this software freezes or the image cannot be displayed, turn the retinal camera and digital camera off and then on again, and restart using the procedure below.
  - 1) Turn off the retinal camera and digital camera.
  - 2) Turn off the PC.
  - 3) Remove the DC coupler of the digital camera, and then reinsert it.
  - 4) Turn on the PC.
  - 5) After the OS is started, turn on to the retinal camera and digital camera.

- (13) Properties settings for the EOS digital camera  
To prevent a wizard or menu opening when the EOS digital camera is connected, perform the procedure below.

Windows Vista:

- 1) Open the Control Panel, and click Hardware and Sound, and click Play CDs or other media automatically.
- 2) Select "Take no action" from the drop-down list for Canon EOS 50D. Then, click [Save].

Windows XP:

- 1) Select Scanners and Cameras in the Control Panel.
- 2) Right-click Canon EOS 50D, then open the Properties screen.
- 3) Click the Events tab and select "Take no action", then click [OK].

## 2.2 Digital camera settings

- (1) This software can only be used for digital cameras that were set by service personnel at installation. For details on the supported digital camera and to change the digital camera that is used, please contact a Canon representative or distributor.
- (2) The settings may vary depending on the digital camera model.
- (3) Do not make any improper changes to the digital camera settings. If the proper settings are not made, the camera may be unable to take images. After changing the settings, turn off the power switch to the digital camera to save the settings.


### Setting example (EOS 50D)

For details on settings, see the EOS 50D Instruction Manual.

Note: Items listed as "Auto" in the Remarks column are automatically set by this software. Items listed as "Required" show items where retinal images cannot be taken unless the settings are made as indicated.

Items listed as "Recommended" are settings recommended by Canon. The customer should act responsibly when making setting changes.

### Basic settings

Item	Settings	Remarks
Shooting mode	M (Manual exposure)	Auto
Drive mode	<input type="checkbox"/> (Single shooting)	Auto
White balance	 (Flash)	Auto
Shutter speed	60 (1/60 sec)	Auto
ISO speed	1600 • 3200 • 6400	Auto

Continued on the following page >>

## Settings based on menu functions

The settings for menu items not shown here can be changed as desired.

Menu items	Settings	Remarks
AEB	0	Required
WB SHIFT/BKT	0,0/±0	Required
Color space	sRGB	Required
Picture Style	Neutral	Auto
Review time	Off	Required
Auto power off	Off	Required
Date/Time	Set to the correct date and time	Recommended
C.Fn I: Exposure 3 ISO expansion	Set	Auto
C.Fn II: Image 2 High ISO speed noise reduction	0	Auto
Shoot w/o card	On	Required
Live View function settings [Live View shoot]	Disable	Auto

## 2.3 CF cards

- (1) Do not insert CF cards into the digital camera.

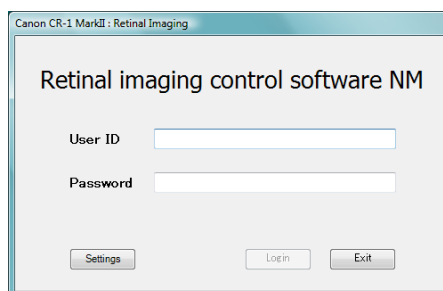
Note: After turning on the digital camera or using the menu button, “No card” (“No CF card”) and “Sensor cleaning” are displayed once only on the LCD monitor of the digital camera. This is not an error.

### 3. Starting up and exiting the software

#### 3.1 Starting up the software and logging in

Note: Before proceeding, log in as a user who has an appropriate access rights in Windows.  
For details, refer to (2) in 2.1 Software (see page 3).

Check that the power of the retinal camera is on, and either double-click the Canon CR-1 Mark II icon on the desktop or from the taskbar click [Start] > [All Programs] > [Canon Retinal imaging control software NM] > [Canon CR-1 Mark II] in this order. The login screen will appear.



Login screen

Objective	Operation	Reference chapter and page
Performing studies	Input the User ID and Password, and click [Login]. The main screen is displayed. User ID distinguishes neither upper-case letters nor lower-case letters.	4. Performing studies (see page 9)
Setting the software	Input the User ID and Password with which the Privilege (see page 100) has been set to the Administrator, and click [Settings]. The setting screen is displayed. User ID distinguishes neither upper-case letters nor lower-case letters.	7. Settings (see page 73)
Exiting the software	Click [Exit]. However, it cannot be clicked while images are being transferred.	3.2 Exiting the software (see page 8)

### 3.2 Exiting the software

When the software is to be exited, exit it on the login screen.

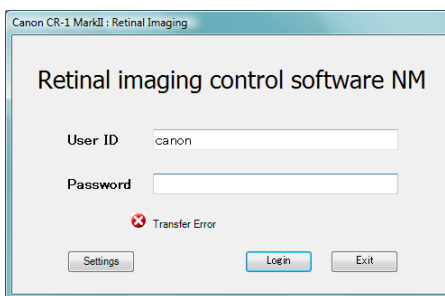
The steps taken to return to the log-in screen differ depending on whether the setting screen or the main screen is displayed.

Screen	Operation
Setting screen	<ol style="list-style-type: none"> <li>1. Return to the setting menu screen.</li> <li>2. On the setting menu screen, click [Close] to return to the login screen (see page 73).</li> <li>3. On the login screen, click [Exit].</li> </ol>
Main screen	<ol style="list-style-type: none"> <li>1. End the study. (see page 25)</li> <li>2. Log off. (see page 29)</li> <li>3. On the login screen, click [Exit].</li> </ol>




#### Icon displays on the login screen

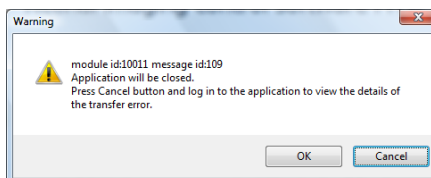
If there is a study which is being transferred, the Transfer icon is displayed on the login screen; if there is a study with a transfer error, the Transfer Error icon is displayed instead.



Display of Transfer Error icon

[Exit] cannot be clicked while the Transfer icon  is displayed so wait until the transfer is completed and the icon is cleared.

If [Exit] is clicked while the Transfer Error icon  is displayed, a Warning screen will appear.



Warning screen

If this is the case, the Transfer Error screen (see page 28) will appear when next logging into the system.



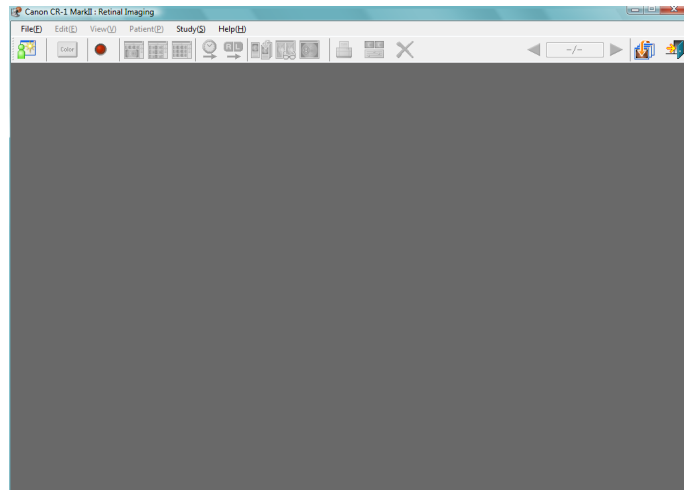
## 4. Performing studies

---

### 4.1 Displaying the main screen

On the login screen, input the User ID and Password, and click [Login]. The main screen is displayed.

For details on the main screen, refer to 6. Main screen operations (see page 41).



Main screen



If there is a study with a transfer error

If there is a study whose transfer status (see page 31) is a transfer error, the error message screen and Re-Transfer Study(ies) of Failed Transfer screen are displayed.

If this is the case, refer to 4.5.3 When a transfer error occurs (see page 28).

## 4.2 Inputting the study

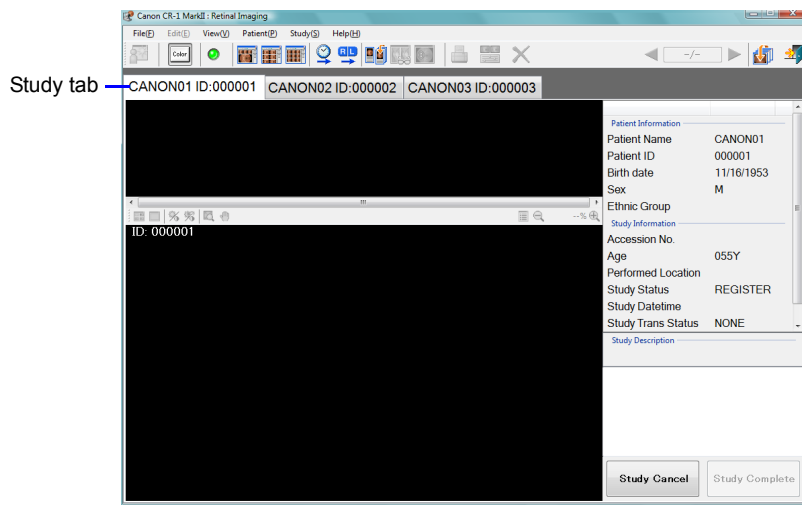
### 4.2.1 Methods of inputting the study

There are four methods below for inputting the study:

1. Manual input (see page 11)
2. Magnetic card/barcode input (see page 13)
3. List input (see page 16)
4. Worklist input (see page 19).

Up to three sets of study can be input, after which it is no longer possible to click the Study icon.

When a multiple number of sets of study have been input, click the study tab to select a study.



The following information is displayed on the study tab.

Item	Description
Patient Name	This item is indicated as the Patient Name.
Patient ID	This item is indicated as the ID: Patient ID.
Accession No.	This item is indicated as the No. Accession No. However, if both the Patient ID and Accession No. have been input, only the Patient ID will be displayed.

## 4.2.2 Manual input

Input the study using the keyboard and mouse.

### 1 Display the Study Input screen.

Click the Study icon, or [Study] > [Study F1] from the menu bar.

If a tab other than Manual Input is displayed, click the Manual Input tab.

Patient Name	Patient ID	Birth Date	Sex	Ethnic Group
CANON01	000001	11/16/1993	M	
CANON02	000002			
CANON03	000003			

Study Input screen (Manual Input tab)

### 2 Input the study.

The names of the items which have been set as Essential Data (see page 83) are indicated in blue.

However, if the Patient Name has been set as an Essential Data, only Last Name and/or First Name will be displayed in blue.

In items where the input format (see page 84) was set, input text of the character type or specific character set.

Item name	No. of characters	Description
Patient ID	Not more than 64 characters	The backslash (\) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input.
Accession No.	Not more than 16 characters	Results organized based on the input format (see page 84) settings are displayed with square brackets [ ] at the right of the input item field.
Last Name	The total for these items must not be more than 60 characters. Separate each item with “^”.	The backslash (\) and equal sign (=) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input. If the patient name has been set as an Essential Data, an error will result unless at least one form of the name is input.
First Name		
Middle Name		
Prefix		
Suffix		
Birth Date		How this is input depends on the birth date input setting (see page 83).
Sex		Select either Male, Female or Other.
Ethnic Group		Click ▼ and select the Ethnic Group.

Continued on the following page >>

#### 4. Performing studies

Item name	No. of characters	Description
Study Description	Not more than 64 characters	The backslash (\) cannot be input. Information input in Study Description is displayed in the Study Description section in the main screen. Characters other than the preset specific character set (see page 76) cannot be input.

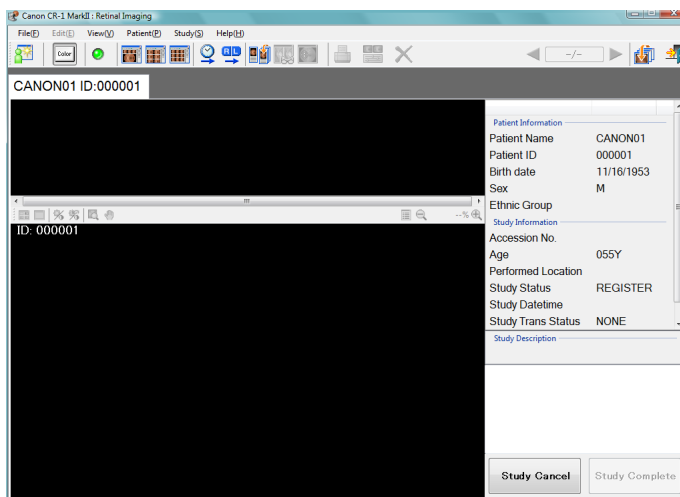


#### To re-input previously input study

To re-input previously input study, click study information from the Patient History.  
To search the Patient History, input the search condition, and click [Search history list]. Only those studies matching the conditions are now displayed.

### 3 Display the main screen.

Click [OK]. The main screen is displayed, and the study information is displayed on it.  
When the new study is input, the study is registered on the Patient History.



Main screen



#### How the system determines whether to treat the input study as a new study

The Patient ID, Last Name, First Name, Middle Name, Prefix, Suffix, Birth Date and Sex of the study which have been input are compared with the study registered on the previously studied patient list, and if there is no study all of whose items match the input items, the study is treated as new study.



#### Display items in the Patient History

The Patient History can display the Patient ID, Patient Name, Birth Date, Sex, and Ethnic Group, but items that are set as Input-Disabled Data (see page 83) are not displayed.



#### Input items saved to the Patient History

The input items saved to the Patient History are the Patient ID, Last Name, First Name, Middle Name, Prefix, Suffix, Sex, Birth Date and Ethnic Group.



#### When the Worklist search screen is displayed

If the Worklist search screen (see page 20) is displayed, click [Cancel].

### 4.2.3 Magnetic card/barcode input

Studies can be input from magnetic cards and barcodes.

Data and communication settings must be made for the magnetic card/barcode reader that is used.

For details, please contact a Canon representative or distributor.

This describes the input procedure after the magnetic card/barcode settings (see page 110) have been made.

#### 1 Display the Study Input screen.

Click the Study icon, or click [Study] > [Study F1] from the menu bar.

If a tab other than Mag Barcode Input is displayed, click the Mag Barcode Input tab.

Items that are set as Essential Data (see page 86) appear with the item name in blue.

Patient Name	Patient ID	Birth Date	Sex
CANON01	000001	10/25/1975	M
CANON02	000002		

Mag Barcode Input screen



When the Worklist search screen is displayed

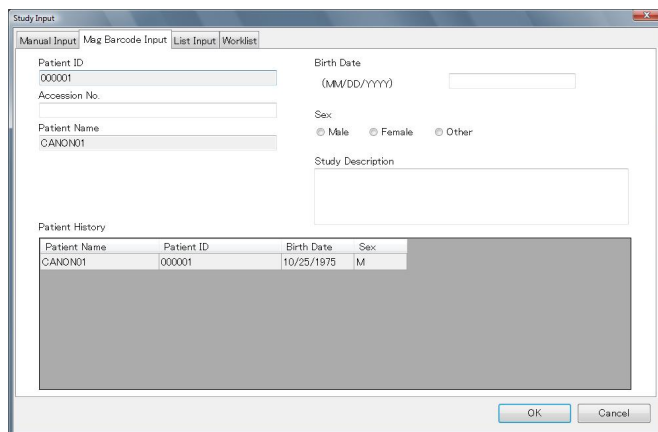
If the Worklist search screen (see page 20) is displayed, click [Cancel].

**2** Input the study from the magnetic card/barcode reader.

Use the magnetic card/barcode reader to input the study.

A search for the input items is performed on the previously studied patient list, and the search results are input.

If the input items were already manually input, they are overwritten by the data from the magnetic card/barcode reader.



Mag Barcode Input screen (after search)

**3** Input the required study items manually.

Item name	No. of characters	Description
Patient ID	Not more than 64 characters	The backslash (\) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input.
Accession No.	Not more than 16 characters	
Patient Name	Not more than 64 characters	The backslash (\) and equal sign (=) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input. If the patient name has been set as an Essential Data, an error will result unless at least one form of the name is input. Input the items separated by a space, comma, or circumflex (^) in the order of Last Name, First Name, Middle Name, Prefix, and Suffix.
Birth Date		How this is input depends on the birth date input setting (see page 83).
Sex		Select either Male, Female or Other.
Study Description	Not more than 64 characters	The backslash (\) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input. Information input in Study Description is displayed in the Study Description section in the main screen.



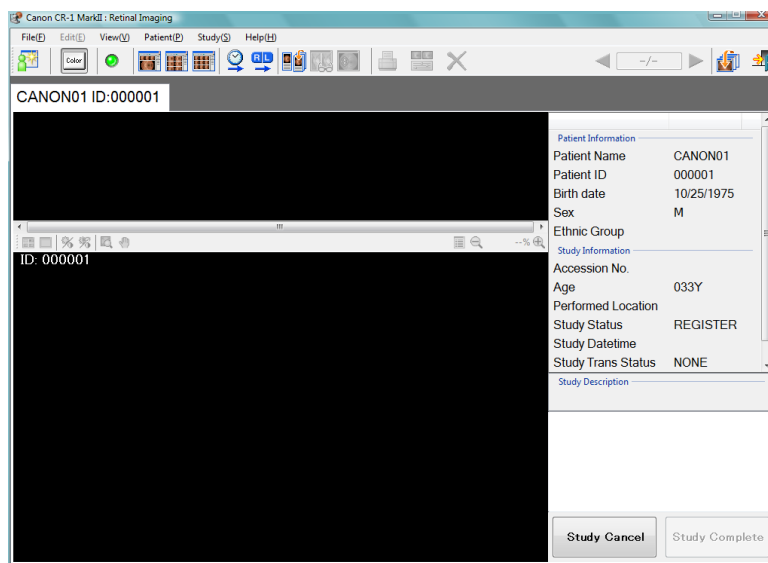
#### Changing information input from the magnetic card/barcode reader

The information input from the magnetic card/barcode reader cannot be changed from the Study Input screen.

To make revisions, refer to 6.10 Changing the patient information (see page 68).

#### 4 Display the main screen.

Click [OK]. The main screen is displayed, and the study information is displayed on it.



#### Patient History information

The input items saved in the Patient History are the Patient Name, Patient ID, Birth Date, Sex and Ethnic Group.

### 4.2.4 List input

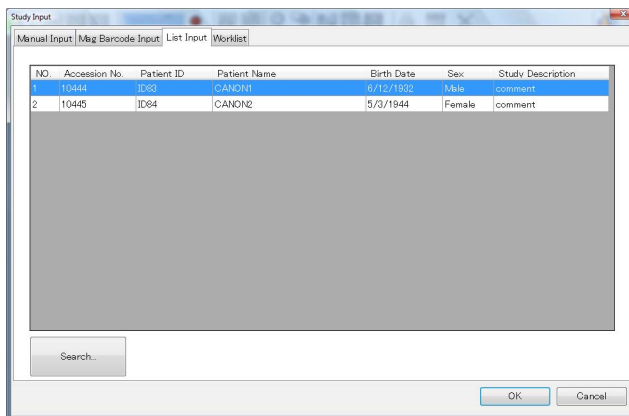
Study information is acquired from the study file (ccrhis.his) and input.

**1** Open the Study Input screen.

Click the Study icon, or click [Study] > [Study F1] from the menu bar.

If a tab other than List Input is displayed, click the List Input tab.

The List Input screen that was set in 7.5.4 List Input tab (see page 86) is displayed.



List Input screen



When the Worklist search screen is displayed

If the Worklist search screen (see page 20) is displayed, click [Cancel].



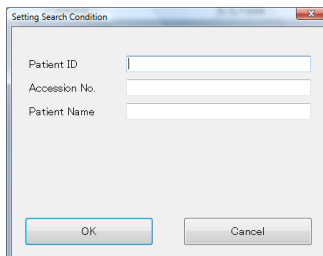
List display

Up to 10,000 items can be displayed in the list.

When the item name of the header is clicked, the sequence in which the studies are displayed can be changed. However, this does not apply to the No.

**2** Display the Setting Search Condition screen.

Click [Search...] to display the Setting Search Condition screen.



Setting Search Condition screen



**3** Input the search conditions.

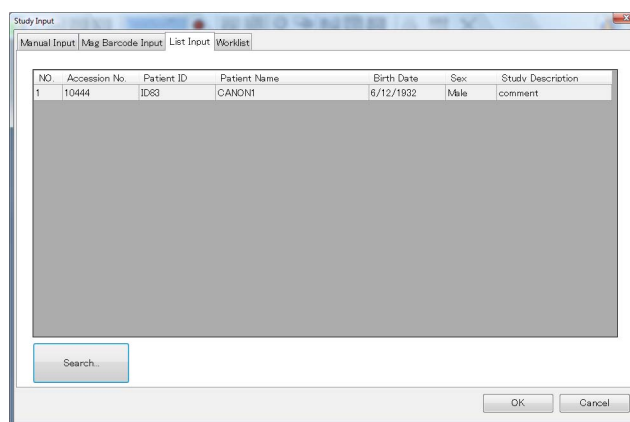
Input the search items.

Item name	No. of characters
Patient ID	Not more than 64 characters
Accession No.	Not more than 16 characters
Patient Name	Not more than 64 characters

**4** Perform a refined search of the list.

Click [OK].

The refined search results are displayed in a list.



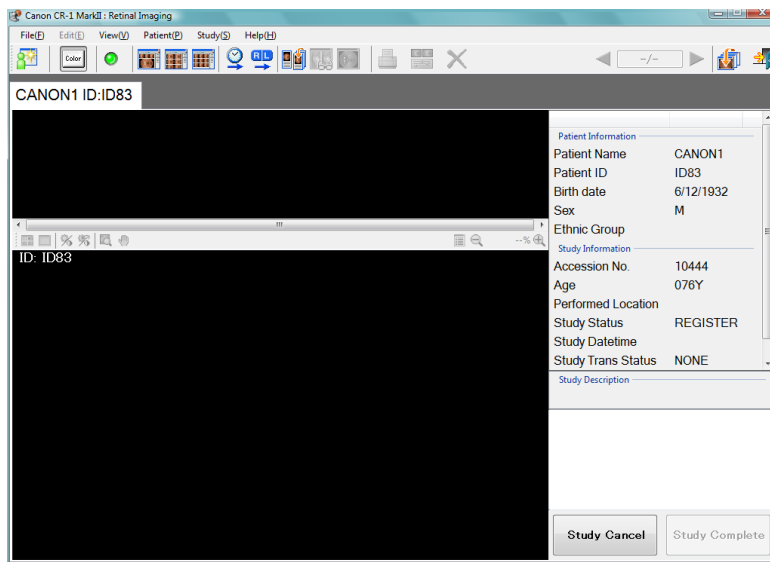
List Input screen (Refined search results)

## 4. Performing studies

### 5 Display the main screen.

Select the study line in the list, and then click [OK].

The main screen is displayed, and the study information is displayed on it.



#### Refined search using magnetic card/barcode reader

If a study is input from a magnetic card/barcode reader while the List Input screen is being displayed, a refined search of the list is conducted based on the search information that was input.

If there is multiple study information (such as Patient Name and Patient ID), a search is performed for studies matching all the information, and the search results are displayed in a list.

Also, if a study is input from a magnetic card/barcode reader while the Setting Search Conditions screen is being displayed, the search conditions are modified based on the study information that was input.

To perform a refined search of the list, click [OK].

### 4.2.5 Worklist input

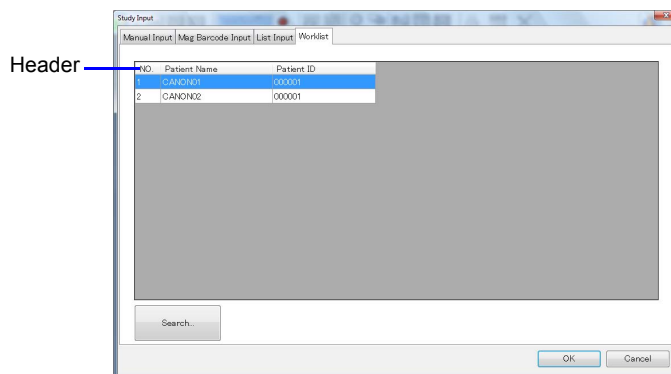
Acquire the worklist from the worklist server.

#### 1 Display the Study Input screen.

Click the Study icon, or click [Study] > [Study F1] from the menu bar.

If a tab other than Worklist is displayed, click the Worklist tab.

The worklist matching the search conditions set in 7.5.5.3 Setting the search conditions (see page 89) is displayed.



Study Input screen (Worklist tab)



MEMO

#### Concerning the worklist display

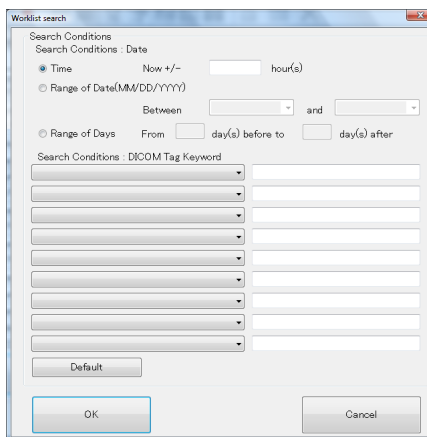
Up to 100 studies can be displayed.

When the item name of the header is clicked, the sequence in which the studies are displayed can be changed. However, this does not apply to No.



**Concerning worklist server searches**

If Display Worklist Search window has been checked in 7.5.5.3 Setting the search conditions (see page 89), the Worklist search screen is displayed automatically. To display the Worklist search screen manually, click [Search...] on the Study Input screen.



Worklist search screen

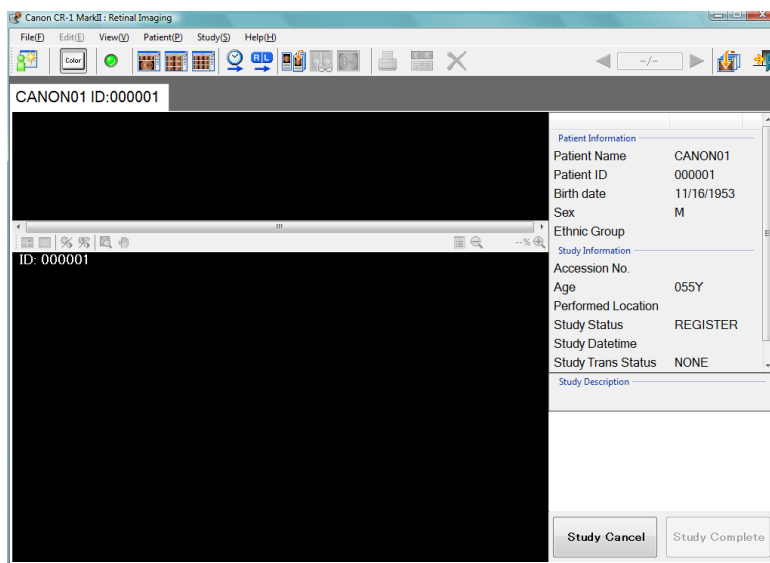
The search conditions can be changed on the Worklist search screen. Input the conditions, and click [OK].

Among the changed search conditions, Patient ID, Patient Name, Accession No. and Requested Procedure ID are saved until either the Study Input screen is closed or switching to another screen. The other items are saved until either exiting the software or the settings are changed in 7.5.5.3 Setting the search conditions (see page 89).

When [Default] is clicked, the values which were set in 7.5.5.3 Setting the search conditions (see page 89) will be input.

**2 Display the main screen.**

Click the worklist to be acquired, and then click [OK] or double-click the worklist. The main screen is displayed, and the information of the acquired worklist is displayed.

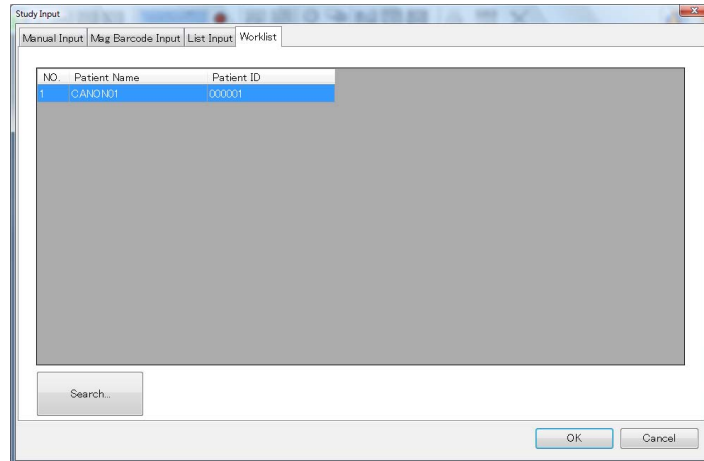


Main screen



### Searches using a magnetic card/barcode reader during worklist input

If a study is input from a magnetic card/barcode reader while the Worklist Input screen is being displayed, a search of the worklist is performed again based on the current worklist search conditions and study information that was input from the magnetic card/barcode reader, and the search results are displayed in a list. If the Search screen is displayed, the search conditions will be changed.



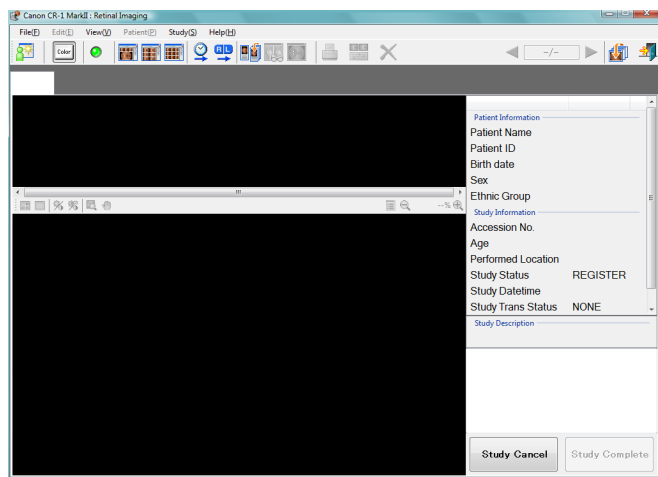
Study Input screen (Worklist re-search results)

### 4.3 Starting a study without opening the Study Input screen

A study can be started as quick as thought skipping input of study information. Enter the patient information when the study is completed.

**1** Display the main screen.

Click [Study] > [Skip Study Input F5] from the menu bar, or press the F5 key on the keyboard. The main screen is displayed with the Study tab left blank.



Skip Study Input main screen

**2** Display the Study Input screen.

Refer to 4.4 Taking images (see page 23) and 4.5.1 Ending a study (see page 25) to perform the study. Click [Study Complete] (see page 24), and the Study Input screen opens automatically.

**3** Input the patient information.

Refer to 4.2.1 Methods of inputting the study (see page 10) to input the items, and click [OK] to close the screen.

---

**Note:** When the setting for the Automatic Accession No. Assignment (see page 85) has been made, Skip Study Input is disabled.

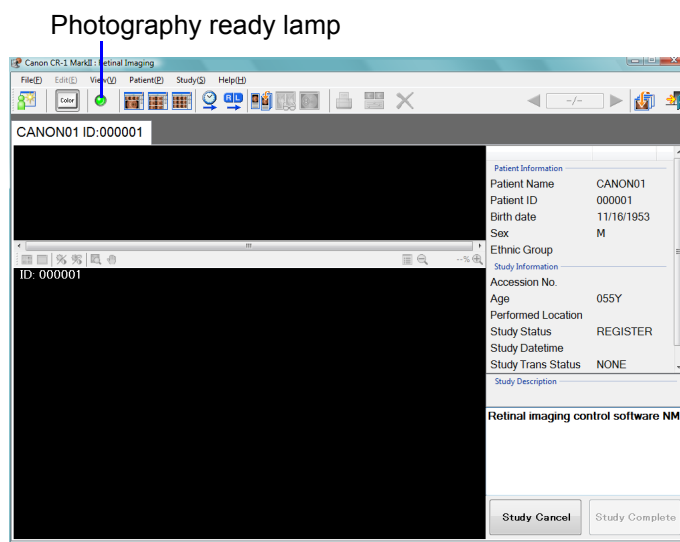
---

## 4.4 Taking images

### 1 Input the Study Description.

A description consisting of up to 64 characters can be input in Study Description.

The identical Study Description is input for all the images which were taken until the study was completed.



Study Description



To input a comment for each image

In order to input a comment for each image, refer to 6.2.2 Referencing the image properties (see page 45).

### 2 Check the Photography ready lamp.

This lamp lights up green if photography is possible.

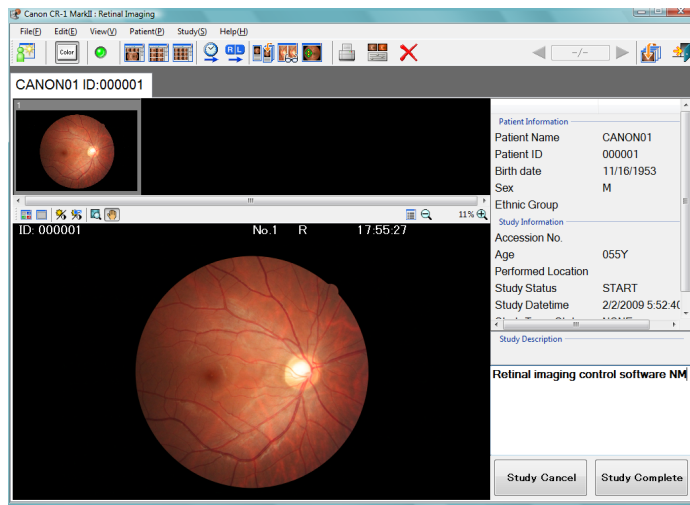
No photography is possible if it is lighted up red so refer to 7.3 Device (see page 77) and check the hardware settings.

## 4. Performing studies

---

### 3 Take the images.

Press the shutter release button on the retinal camera. The retinal image is taken.



Image

### 4 Refer to the image.

To operate or print the image, refer to 6. Main screen operations (see page 41).



## 4.5 Ending a study and transferring images

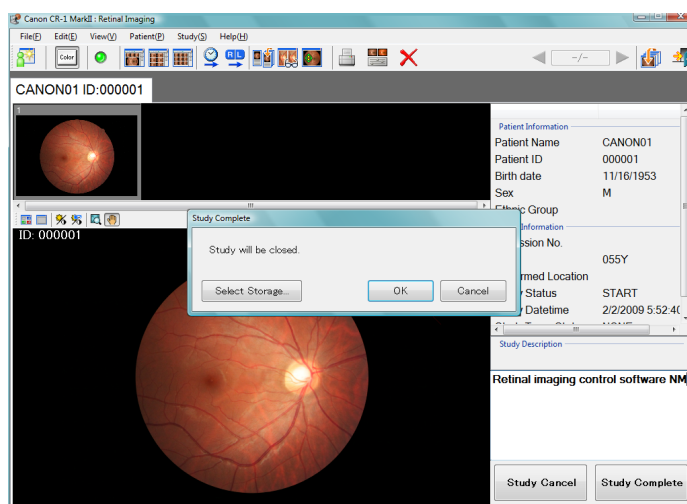
### 4.5.1 Ending a study

#### 1 End the study.

Click [Study Complete]. The Study Complete screen is displayed.

To end the study, click [OK].

To select the storage, follow the steps described below.



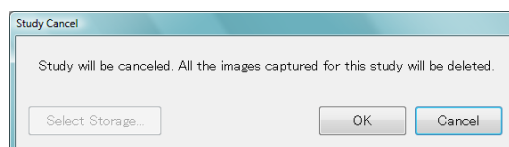
Study Complete screen



#### When [Study Cancel] is selected

When [Study Cancel] is clicked, the Study Cancel screen is displayed.

If [OK] is then clicked, the study is ended without saving the images which have been taken.



Study Cancel screen



#### Study Complete and Study Cancel

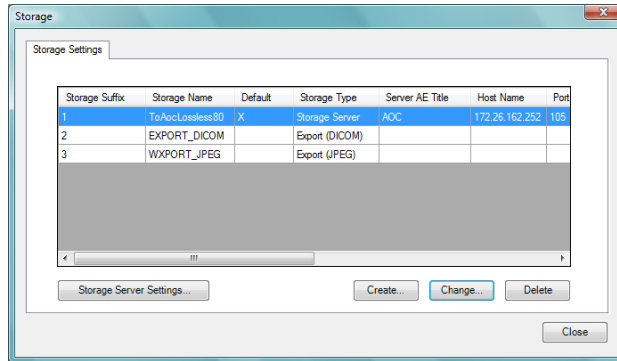
The same operation can be performed by selecting [Study] > [Study Complete F12] or [Study] > [Study Cancel] from the menu bar.



#### When a study is started without opening the Study Input screen

When a study is started without opening the Study Input screen, click [Study Complete] to display the Study Input screen. Refer to 4.2 Inputting the study (see page 10), and input the study information.

- 2 Display the Select the Storage(s) screen.  
Click [Select Storage...].



Select the Storage(s) screen




**When [Select Storage...] is disabled**

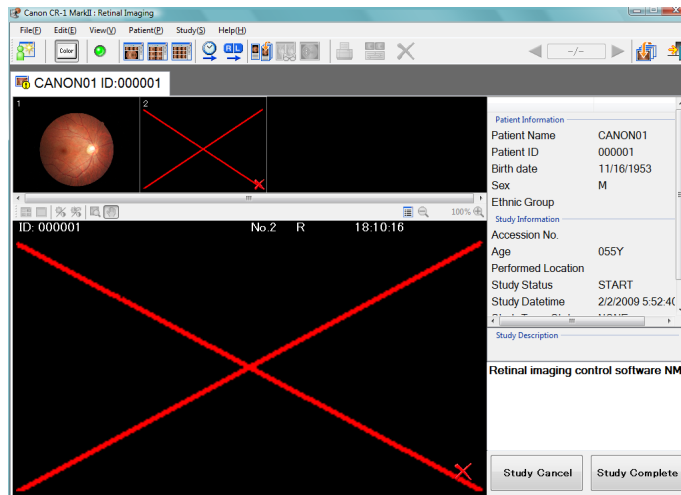
Select “When a study is completed” on the Transfer Timing tab (see page 75) to enable [Select Storage...].

- 3 Select the storage.  
Click the storage.  
To set two storages, click the storage while pressing the Ctrl key on the keyboard.
- 4 Confirm the storage.  
Click [OK]. The Select the Storage(s) screen is exited, and operation returns to step 1.



**If a study was not completed properly**

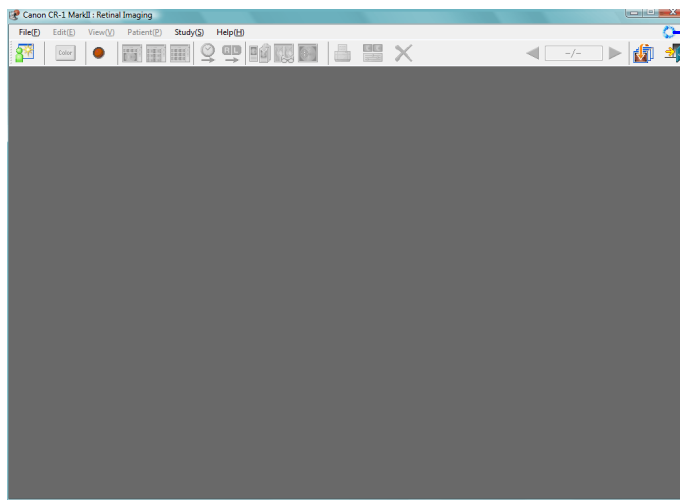
If a study was not completed properly because, for instance, the power of the computer was cut off during the course of the study, the main screen will be displayed in the status, which was established when the study was last completed, when the user next logs into the system. In a case like this, an icon  is displayed on the study tab. If an image was not saved properly, an image with a red “x” will appear on the thumbnail image and main image, and the image will be rejected (see page 67).



When an image was not saved properly

### 4.5.2 Checking the transfer status



The transfer status is displayed by the icon at the top right of the main screen.  
 If the transfer is completed properly, the icon display is cleared.



Transfer status icon

Position of transfer status icon


Icon displays

Icon	Status	Description
	Transfer	There is a study currently being transferred.
	Transfer Error	<p>A transfer error has occurred.                      An Transfer Error screen is displayed when this icon is clicked. Refer to the message, and take the remedial action.                      When retransferring a study, refer to 5.1.3.2 Transferring all studies (see page 34).                      When the Transfer Error screen is displayed, the Transfer Error icon is no longer indicated.</p> <div data-bbox="746 1435 1324 1794" data-label="Image"> </div> <p style="text-align: center;">Transfer Error screen</p>

### 4.5.3 When a transfer error occurs

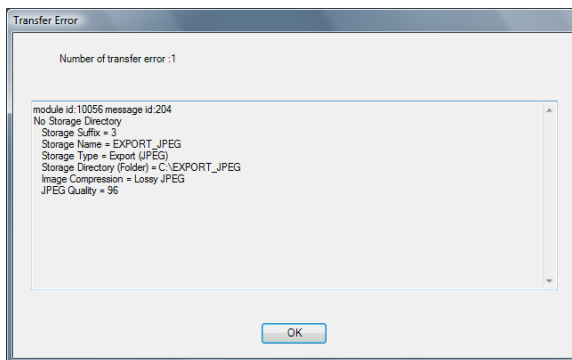
The transfer status is displayed by the icon on the login screen (see page 8) or main screen.

It can also be displayed on the Study Logs screen (see page 31).

If there is a study whose transfer has failed or an Transfer Error screen which has not appeared even once, the Transfer Error icon  will appear on the main screen or login screen.

If the user has logged in or logged off while a Transfer Error icon is displayed, the Transfer Error screen will be displayed.

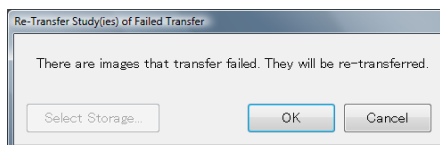
This Transfer Error screen is displayed once, and then cleared.



Transfer Error screen

Re-Transfer Study(ies) of Failed Transfer screen is displayed when the user logs in or logs off while there is a study which has resulted in a transfer error.

Re-Transfer Study(ies) of Failed Transfer screen is cleared when the transfer error is remedied.

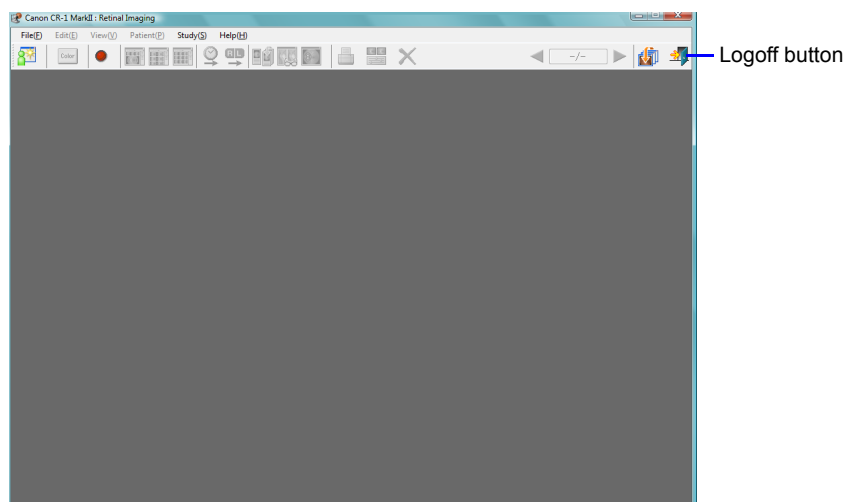


Re-Transfer Study(ies) of Failed Transfer screen

## 4.6 Logging off

To log off, click the logoff button at the top right of the screen, or select [File] > [Logoff Alt+F4] from the menu bar.

The login screen (see page 7) is displayed.



MEMO

### Concerning the transfer of images

If the current transfer status is a transfer error or if an untransferred image exists, the same operation is performed as when [Transfer All] is executed on the study logs (see page 34).

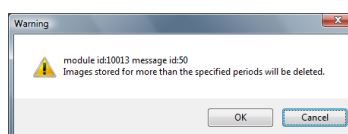


MEMO

### When there is a study which has exceeded its storage period

A study can be deleted only after it has been saved for the period set by the Storage tab (see page 80) after its transfer has been completed.

If there is a study which exceeded the period, the Warning screen will appear when the user logs off. Click [OK] to delete the study.



**Note:** If there is a study in progress, the user cannot log off. Before logging off, be sure to either end or cancel the study.



## 5. Operations on study logs

The two types of study data below can be viewed through the Study Logs screen.

- Temporarily Saved: Study log data that is temporarily saved to the database in the control software
- Study Log Files: Study log data that was saved to a specified folder

Select the Temporarily Saved tab or Study Log Files tab to display the respective study logs.

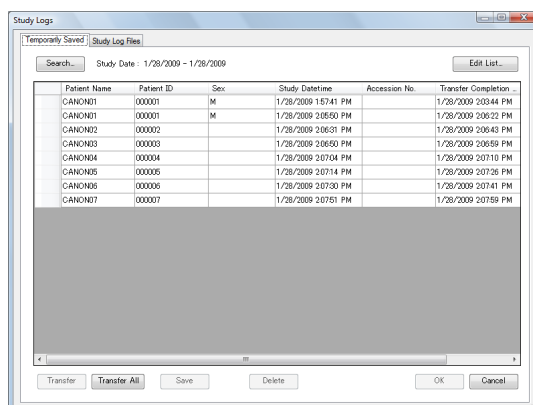
### 5.1 Temporarily saved study logs

#### 5.1.1 Displaying list of temporarily saved study logs

Click the Study Logs icon on the main screen (see page 41) and click the Temporarily Saved tab.




The study logs that were temporarily saved based on the conditions that were set in 7.11 Study Logs (see page 110) are displayed in a list.

The displayed items can also be set by making the settings in 5.1.6 Setting the display items (see page 36).



Study Logs screen (Temporarily Saved)

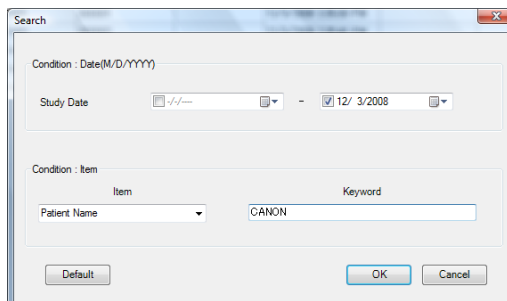
If the Study Trans Status has been set as an item to be displayed, the transfer status icons are displayed.

Icon	Status	Description
None	Untransferred	A study which has not been transferred to any destination
	Transfer	A study which is being transferred
	Transfer Completed	A study whose transfer has been completed
	Transfer Error	A study which contains images whose transfer has failed

### 5.1.2 Searching for studies

- 1 Display the Search screen.

Click [Search...] on the Study Logs screen (Temporarily Saved tab).



Search screen


- 2 Set the search conditions.

Display	Operation
Study Date	Input the search start date on the left and the search end date on the right. It is also possible to set only the start date or end date.
Item	Click ▼ to select the search item.
Keyword	Input a keyword consisting of up to 64 characters. No distinction is made between upper-case and lower-case characters. A search based on a keyword will not be conducted if no characters have been input.
[Default]	When this is clicked, the 7.11 Study Logs (see page 110) setting is applied to the Study Date.



- 3 Proceed with the search.

Click [OK].

The search starts, and its results are displayed on the Study Logs screen.



**Number of displayed study logs in list**

The maximum number of study logs that can be displayed in the list is 10,000. A flashing error icon  is displayed when the number of displayable study logs is exceeded, and so please change the search conditions. The error icon  disappears once the number of study logs is within the displayable range.



## 5.1.3 Transferring studies

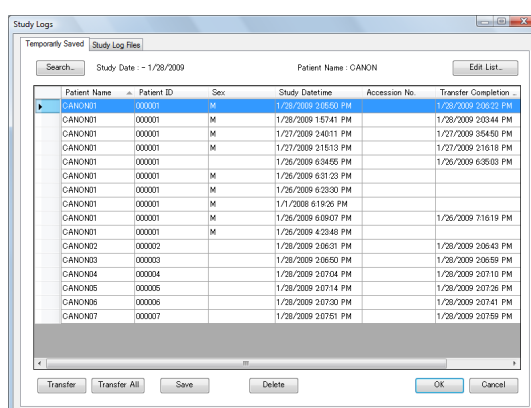
### 5.1.3.1 Selecting studies for transfer

When a study has been selected and [Transfer] clicked, the DICOM information will be updated in accordance with the settings of the 7.7.2 Study Logs tab (see page 99) except for those studies which are in the untransferred transfer status.

#### 1 Select the study.

Click the study on the Study Logs screen (Temporarily Saved tab).

If a multiple number of studies are to be selected, click the studies while pressing the Ctrl key on the keyboard; if a range of studies is to be selected, click the studies while pressing the Shift key on the keyboard.



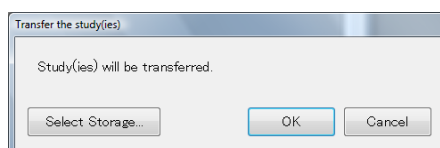
Patient Name	Patient ID	Sex	Study Date/Time	Accession No.	Transfer Completion
CANON1	00001	M	1/26/2009 1:58:50 PM		1/26/2009 2:00:23 PM
CANON1	00001	M	1/26/2009 1:57:41 PM		1/26/2009 2:03:44 PM
CANON1	00001	M	1/27/2009 2:40:11 PM		1/27/2009 2:54:50 PM
CANON1	00001	M	1/27/2009 2:15:13 PM		1/27/2009 2:16:18 PM
CANON1	00001		1/26/2009 6:34:05 PM		1/26/2009 6:35:03 PM
CANON1	00001	M	1/26/2009 6:31:23 PM		
CANON1	00001	M	1/26/2009 6:22:30 PM		
CANON1	00001	M	1/1/2008 6:19:26 PM		
CANON1	00001	M	1/26/2009 6:09:07 PM		1/26/2009 7:16:19 PM
CANON1	00001	M	1/26/2009 4:29:49 PM		
CANON2	00002		1/26/2009 2:06:31 PM		1/26/2009 2:06:43 PM
CANON3	00003		1/26/2009 2:06:50 PM		1/26/2009 2:06:59 PM
CANON4	00004		1/26/2009 2:07:04 PM		1/26/2009 2:07:10 PM
CANON5	00005		1/26/2009 2:07:14 PM		1/26/2009 2:07:26 PM
CANON6	00006		1/26/2009 2:07:30 PM		1/26/2009 2:07:41 PM
CANON7	00007		1/26/2009 2:07:51 PM		1/26/2009 2:07:59 PM

#### 2 Transfer the studies.

Click [Transfer].

Transfer the study(ies) screen is displayed. Click [OK].

However, if the transfer status is “Transfer,” a Warning screen is displayed, and the study concerned cannot be transferred.



Transfer the study(ies) screen



#### Concerning the selection of the storages

When selecting the storage, refer to 4.5.1 Ending a study (see page 25).

### 5.1.3.2 Transferring all studies

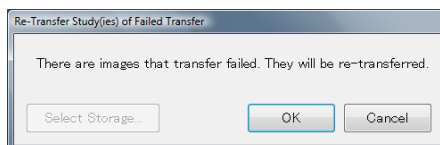
Take the steps below to transfer all the studies whose transfer status is transfer error or untransferred.

#### 1 Transfer the studies in the transfer error status.

Click [Transfer All].

If there are studies whose transfer status is transfer error, the Re-Transfer Study(ies) of Failed Transfer screen will appear, in which case click [OK].

This screen will not appear if there are no studies whose transfer status is transfer error. Follow the sequence of steps described below.



Re-Transfer Study(ies) of Failed Transfer screen



MEMO

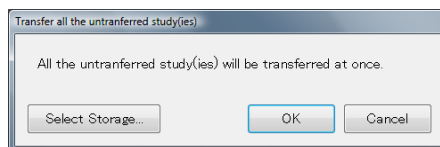
#### Concerning the selection of the storages

When transferring studies whose transfer status is Transfer Error, [Select Storage...] cannot be selected.

If a multiple number of storages have been set, the studies will be transferred only to the storages to which transfer failed.

#### 2 Transfer the to-be-transferred studies.

If there are studies whose transfer status is untransferred, the Transfer all the untransferred study(ies) screen will appear, in which case click [OK].



Transfer all the untransferred study(ies) screen



MEMO

#### Concerning the selection of the storages

When transferring studies whose transfer status is untransferred, [Select Storage...] can be selected.

When selecting the storage, refer to 4.5.1 Ending a study (see page 25).

### 5.1.4 Saving studies

When study log data was temporarily saved in the database of the control software, each study can be saved to a user-selected location.

**Note:** To save a study log data, access rights for the storage directory must be set.  
For details, refer to (2) in 2.1 Software (see page 3).

#### 1 Select the study.

On the Study Logs screen, select the study.

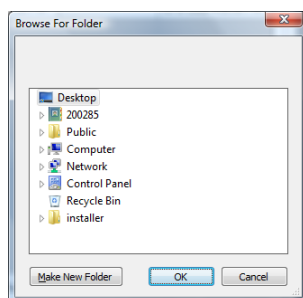
To select multiple studies, click the studies while holding down the Ctrl key on the keyboard. To select a range of studies, click the studies while holding down the Shift key on the keyboard.

#### 2 Save the study to a designated folder.

Click [Save]. The Browse For Folder screen is opened.

Set the folder where the study will be saved, and click [OK].

The study is saved.



Browse For Folder screen

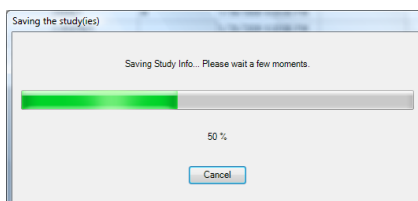


MEMO

#### To cancel saving

To cancel saving of the studies, click [Cancel].

Once [Cancel] is clicked, the saving of unsaved studies is aborted, but studies where saving was completed or where saving was in progress are saved to the designated saving location.



Saving the study(ies) screen

### 5.1.5 Deleting studies

**1** Select the study.

On the Study Logs screen, select the study.

If a multiple number of studies are to be selected, click the studies while pressing the Ctrl key on the keyboard; if a range of studies is to be selected, click the studies while pressing the Shift key on the keyboard.

**2** Delete the study.

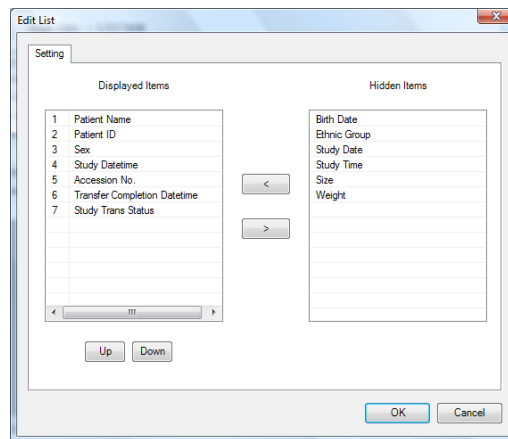
Click [Delete]. The Warning screen is displayed, and the “Selected study will be deleted.” message is displayed. Click [OK] to delete the study.

However, if the transfer status is “Transfer”, a Warning screen is displayed, and the study concerned cannot be deleted.

### 5.1.6 Setting the display items

**1** Display the Edit List screen.

Click [Edit List...].



Edit List screen

**2** Set the items to be displayed.

To add or delete a display item, select the item, and then click  or .

**3** Set the display sequence of the Displayed Items.

The items on the Displayed Items appear from the left of the list in sequence from the top. To change the display sequence, select the item, and then click [Up] or [Down].

**4** Enable the setting.

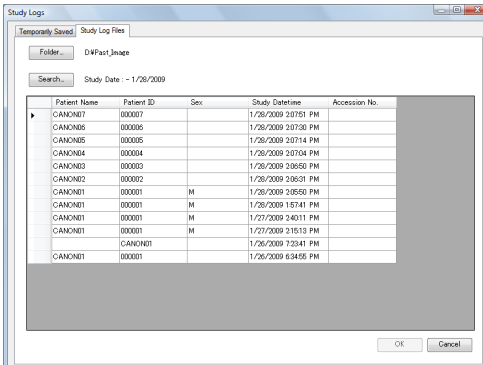
Click [OK].

## 5.2 Study log file

The study logs that were saved to a selected location are displayed on the Study Log Files tab (see page 35).

### 5.2.1 Displaying study log files list

- 1 Display the Study Logs screen.  
Click the Study Logs icon.
- 2 Select the study log file.  
Click the Study Log Files tab.



The screenshot shows a window titled 'Study Logs' with a 'Study Log Files' tab. It contains a table with the following data:

Patient Name	Patient ID	Sex	Study Datetime	Accession No.
CANON07	000007		1/26/2009 2:07:51 PM	
CANON05	000005		1/26/2009 2:07:30 PM	
CANON05	000005		1/26/2009 2:07:14 PM	
CANON04	000004		1/26/2009 2:07:04 PM	
CANON03	000003		1/26/2009 2:06:50 PM	
CANON02	000002		1/26/2009 2:06:31 PM	
CANON01	000001	M	1/26/2009 2:06:50 PM	
CANON01	000001	M	1/26/2009 1:57:41 PM	
CANON01	000001	M	1/27/2009 3:40:11 PM	
CANON01	000001	M	1/27/2009 3:15:13 PM	
CANON01	CANON01		1/26/2009 7:33:41 PM	
CANON01	000001		1/26/2009 6:34:55 PM	

Study Logs screen (Study Log Files tab)

- 3 Specify the location of the study log.  
Click [Folder], and specify the location of the study log file in the Browse For Folder screen. The folder location of the file(s) is displayed on the right side of the [Folder] button.
- 4 Specify the conditions for the studies to be displayed.  
Click [Search], and set the conditions to be displayed such as the Study Date and Item in the Search screen.  
For details, refer to 5.1.2 Searching for studies (see page 32).



#### Display items

Items set on the Edit List screen (see page 36) are displayed. However, the Transfer Completion Datetime and Study Trans Status are not displayed

**Note:** In the Study Logs screen of the Study Log Files list, the Transfer, Transfer All, Save, and Delete commands cannot be executed.

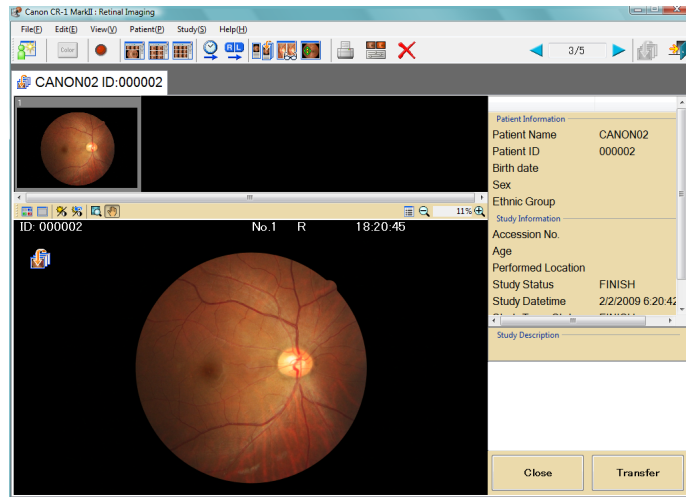
### 5.2.2 Deleting study logs

- 1 Display the folder of the study log file to be deleted in the Windows screen.
- 2 Select the folder of the study log file to be deleted, and press the Delete key.

## 5.3 Study log screens



### 5.3.1 Displaying a study log screen

To display a study log screen, either click the study on the Study Logs screen (Temporarily Saved) (see page 31) or Study Logs screen (Study Log Files) (see page 37) and then click [OK] or double-click the study.



Study log screen

What is displayed is basically the same as on the main screen: the differences from the main screen are described below.

- Images cannot be taken while the Study Logs screen is being displayed.
- The color of image toolbar, Patient Information, Study Information, Study Description, [Close] and [Transfer] are different.
- Some of the icons on the toolbar cannot be used.
- The study log screen can display only one study.
- On the temporarily saved study log screen,  is displayed on the study tab and the main image. On the Study Logs screen (Study Log Files),  is displayed on the study tab and the main image.
- [Study Cancel] on the main screen is replaced with [Close] on the past study screen; similarly, [Study Complete] on the main screen is replaced with [Transfer] on the study log screen.
- More photographs cannot be added to a study log.

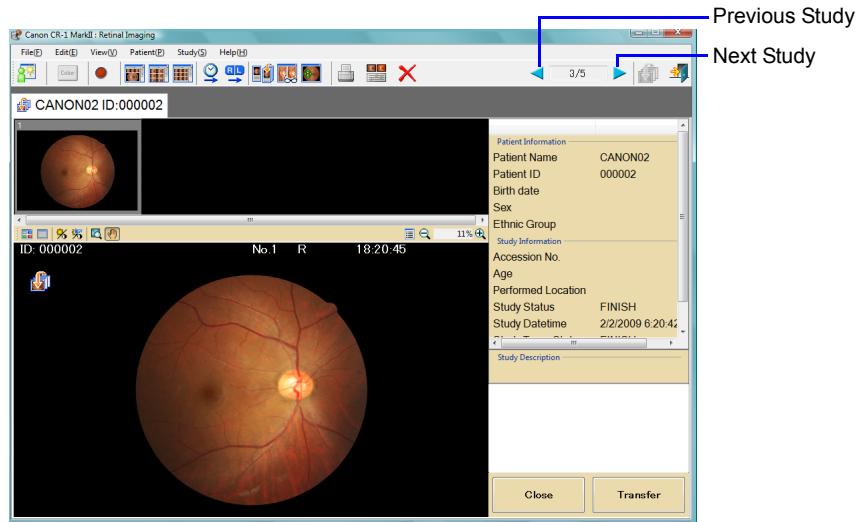
---

Note: Following functions are not available on the study log screen for Study Log Files:

- Transferring the studies (see page 33)
  - Correcting the study descriptions (see page 23)
  - Correcting the image comments (see page 46)
  - QA (see page 65)
  - Rejecting the images (see page 67)
  - Correcting the patient information (see page 68)
  - Measuring the C/D ratio (see page 54)
  - Changing the study (see page 39)
-

### 5.3.2 Changing study

When [Next Study] or [Previous Study] button is clicked while displaying a study log the next study or previous study is displayed in the listing order displayed in the study logs.



#### Shortcut key operation

The same operation can be performed using the space bar (Next Study) and back space key (Previous Study) on the keyboard.



#### Study log viewing indicator

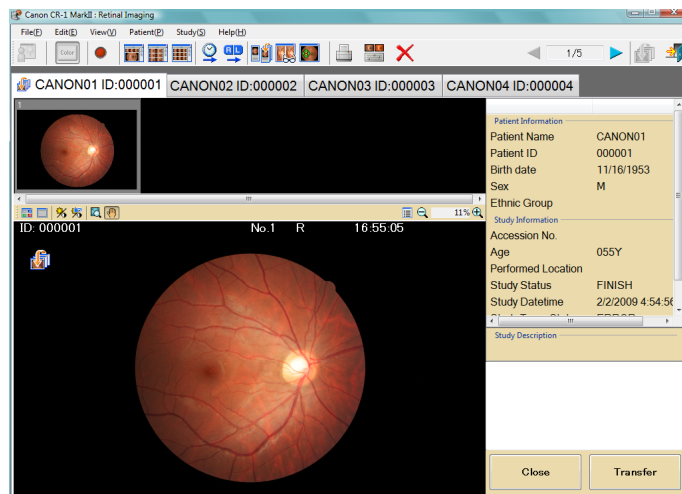
When a study log is opened, the position information is displayed as shown below.

Example:  Denominator: Number of studies in the study log list  
 Numerator: Position of the opened study

### 5.3.3 Study log screen and photography

New study information can be added even while the study log screen is displayed.

However, photography is not possible on the study log screen.



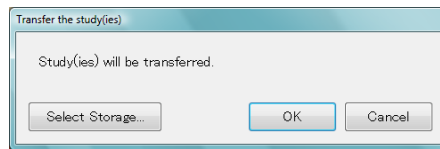
### 5.3.4 Exiting the study log screen

#### 5.3.4.1 Transferring the study and exiting the study log screen

Click [Transfer].

The Transfer the study(ies) screen is displayed. Click [OK].

However, if the transfer status is “Transfer,” a Warning screen is displayed, and the study concerned cannot be transferred.



Transfer the study(ies) screen

When the studies are transferred, the DICOM information will be changed in accordance with the settings of the 7.7.2 Study Logs tab (see page 99) except for those studies which are in the untransferred transfer status.



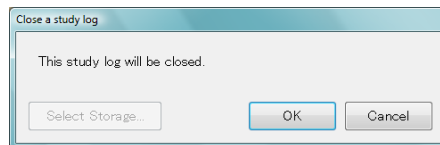
#### Concerning the selection of the storages

When selecting the storages, refer to 4.5.1 Ending a study (see page 25).

#### 5.3.4.2 Exiting the study log screen

Click [Close].

The Close a study log screen is opened. Click [OK].



Close a study log screen



#### [Transfer] and [Close] for past studies

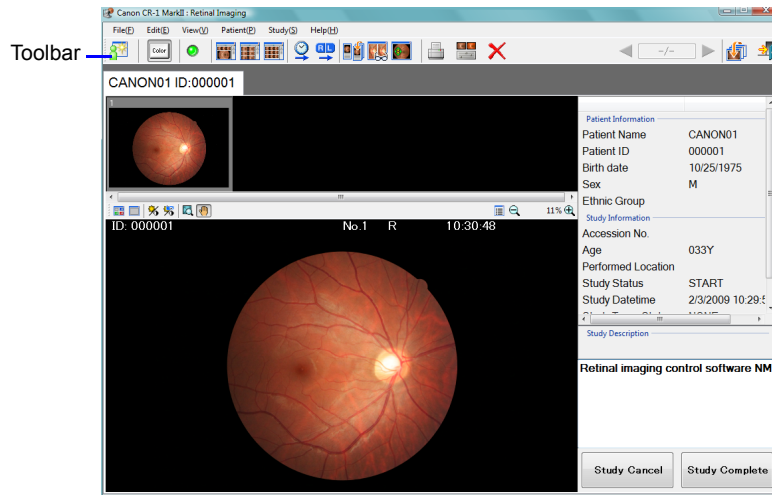
The same operations can be performed by selecting [Study] > [Close] and [Study] > [Transfer] from the menu bar.



## 6. Main screen operations

### 6.1 Main screen

#### 6.1.1 Toolbar





#### Toolbar

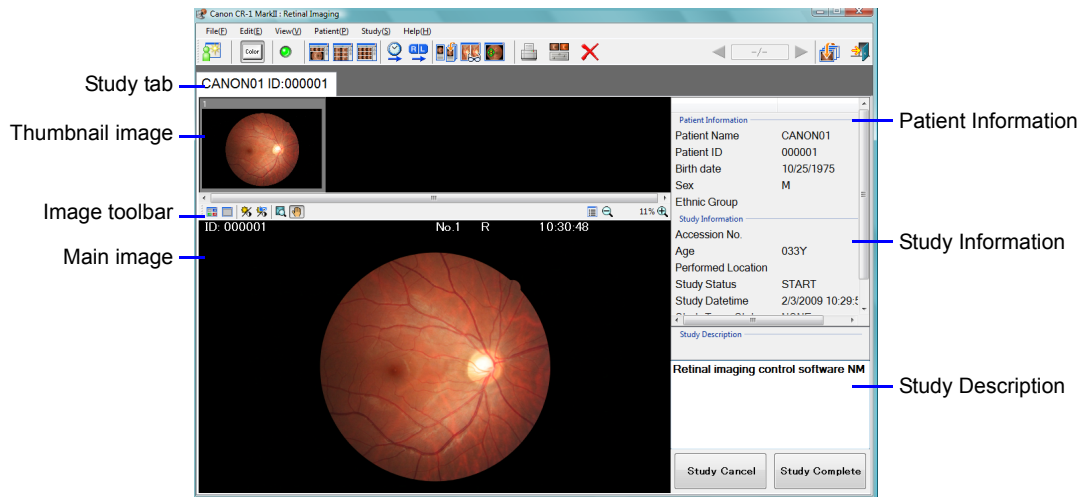
Icon	Icon name	Reference chapter and page
	Study	4.2 Inputting the study (see page 10)
	Color	4.4 Taking images (see page 23)
	Photography ready lamp	
	Main and Thumbnails	
	Two-Row Thumbnails	6.2 Image display methods and properties (see page 44)
	Thumbnails Only	
	By Time	
	By R/L	
	Compare Studies	
	Stereo View	6.6 Stereo view (see page 58)
	C/D Ratio	6.5 Measuring C/D ratio (see page 54)
	Easy PhotoPrint EX or Print	6.7 Printing images (see page 60)
	QA	6.8 QA (see page 65)
	Reject	6.9 Rejecting images (see page 67)
	Previous Study	5.3.2 Changing study (see page 39)
	Next Study	

Continued on the following page >>










## 6. Main screen operations

Icon	Icon name	Reference chapter and page
	Study Logs	5. Operations on study logs (see page 31)
	Logoff	3.2 Exiting the software (see page 8)

### 6.1.2 Display information



### Image toolbar

Icon	Icon name	Reference chapter and page
	RGB Channels	6.3.2 RGB channel view (see page 49)
	Normal View	
	Contrast/Brightness	6.3.3 Contrast/brightness adjustment (see page 50)
	Reset Contrast/Brightness	
	Loupe	6.3.4 Enlarging an area of the image (Loupe) (see page 51)
	Hand	6.3.5 Moving the displayed area (see page 51)
	Image Property	6.2.2 Referencing the image properties (see page 45)
	Zoom Out	6.3.1 Zooming (see page 48)
	Zoom In	
%	Display Magnification	

### Display information

Screen area	Reference chapter and page
Study tab	4.2.1 Methods of inputting the study (see page 10)
Thumbnail image	7.9.2 Thumbnail Image Info. tab (see page 103)
	7.9.4 Thumbnail Order tab (see page 105)
Main image	7.9.1 Main Image Info. tab (see page 102)
Patient Information	7.9.3 Study Info. tab (see page 104)
Study Information	
Study Description	4.4 Taking images (see page 23)

## 6.1.3 Menu bar

	Menu	Reference chapter and page
File	Change a Password	6.12 Changing the password (see page 71)
	Print Adjustment	6.7.1 Adjusting the printing parameters (see page 60)
	Print	6.7.2 Using simple printing to print images (see page 61)
	Page Setup	
	Easy-PhotoPrint EX	6.7.3 Using Easy-PhotoPrint EX to print images (see page 63)
	Save As	6.11.1 Save as (see page 69)
	JPEG Settings	6.11.2 JPEG settings (see page 70)
	Logoff	4.6 Logging off (see page 29)
Edit	Select All	All the images are selected.
View	Hide Rejected Images	6.2.1 Selecting the display method (see page 44)
	Hide Study Information	
	Stereo View	6.6 Stereo view (see page 58)
Patient	Change a Patient Information	6.10 Changing the patient information (see page 68)
Study	Study F1	4.2 Inputting the study (see page 10)
	Skip Study Input F5	4.3 Starting a study without opening the Study Input screen (see page 22)
	Study Cancel	4.5.1 Ending a study (see page 25)
	Study Complete F12	
	Set Auto Numbering	7.5.2 Manual Input tab (see page 83)
	Close	5.3.4 Exiting the study log screen (see page 40)
	Transfer	5.1.3 Transferring studies (see page 33)
Help	Version	6.13 Displaying the version information (see page 72)

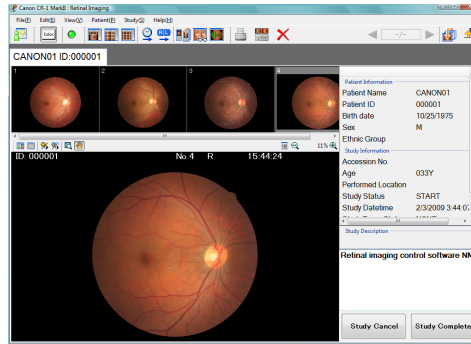
## 6.2 Image display methods and properties

### 6.2.1 Selecting the display method

1 Click the image display icon.

1) Main and Thumbnails icon

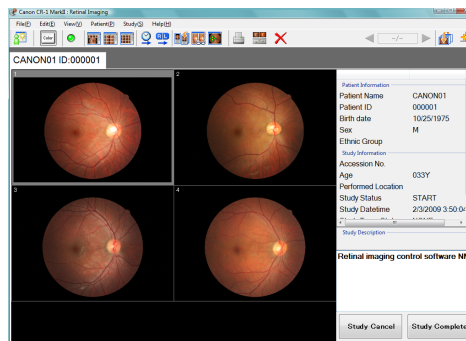
The thumbnails are displayed at the top of the screen. When a thumbnail display is clicked, its enlarged image is displayed at the bottom of the screen.



Main and Thumbnails display

2) Two-Row Thumbnails icon

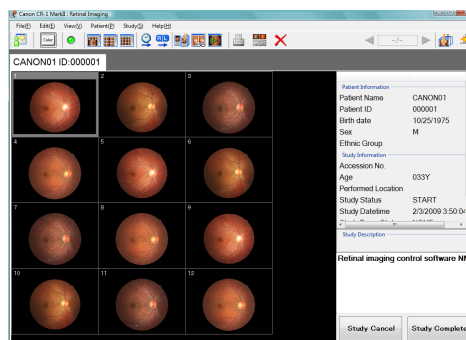
Images are displayed in two columns.



Two-Row Thumbnails display

3) Thumbnails Only icon

Thumbnails of images are displayed.



Thumbnails Only display

## 2 Change the sequence in which the images are to be displayed.

When displaying the images in the sequence in which they were taken, click the By Time icon; when displaying the images in the sequence of the left and right eyes, click the By R/L icon.



### Turning display of the study information screen on and off

On the menu bar, click [View] > [Hide Study Information] to turn the display of the study information screen on and off.



### Turning display of rejected images (see page 67) on and off

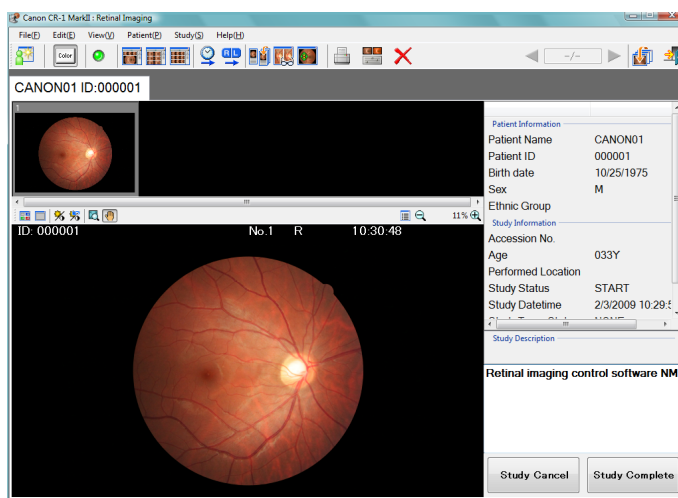
On the menu bar, click [View] > [Hide Rejected Images] to turn the display of rejected images on and off.

## 6.2.2 Referencing the image properties

When the main and thumbnail display has been selected, the properties of image can be referenced.

### 1 Select the main and thumbnail display.

Click the Main and Thumbnails icon.

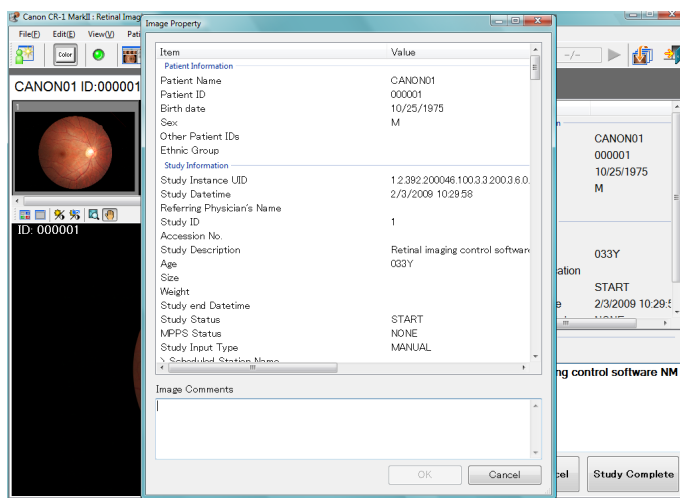


Main and thumbnail display

### 2 Select the image.

Click the thumbnail image.

- 3 Display the Image Property screen.  
Click the Image Property icon.

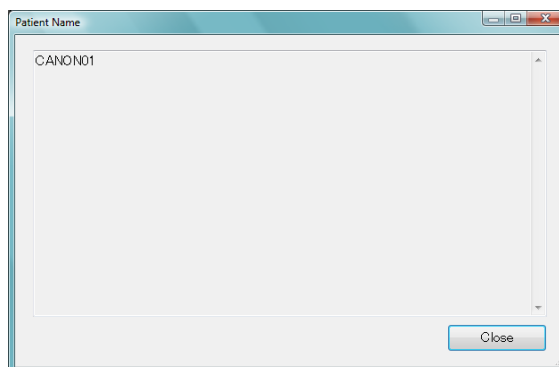


- 4 Input comments for the image.  
Input comments in the Image Comments field. A description consisting of up to 4096 characters can be input.  
Different image comments for different images can be saved.  
For a study log file, image comments cannot be edited.

**Setting of the Image Comments**

For details on the image comments saved on DICOM images, refer to 7.7.1 Study tab (see page 97).

- 5 Display the item.  
Select and double-click the name of the item whose value is to be referenced.  
The item display screen is displayed.  
The screen is exited when [Close] is clicked.



Item display screen

**6** Exit the Image Property screen.

Click [OK].

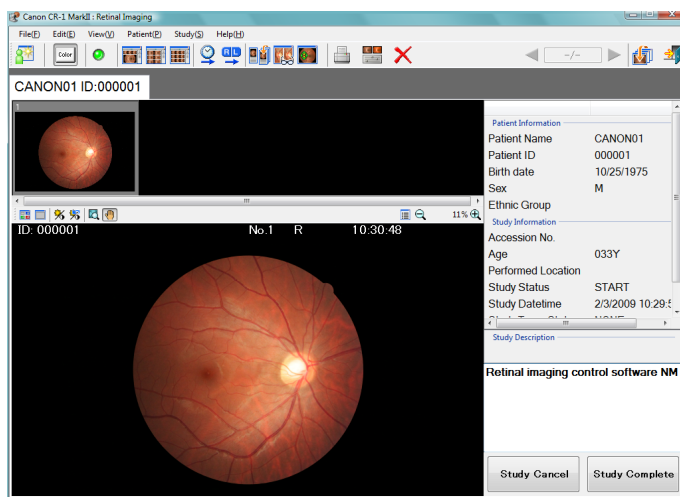
However, [OK] cannot be clicked if the image comments have not been changed, in which case click [Cancel].

## 6.3 Image operations



### 6.3.1 Zooming

When the main & thumbnail display has been selected, Zoom In icon and Zoom Out icon can be used.

- 1 Select the main & thumbnail display.  
Click the Main and Thumbnails icon.



Main & thumbnail display

- 2 Select the image.  
Click the thumbnail image.
- 3 Change the display magnification rate.  
Click the Zoom Out icon  or Zoom In icon .



#### Zoom in/zoom out operations

Each time the mouse is clicked, the image is zoomed in or out.

The initial display shows the minimum size. When the magnification rate is 100%, the image cannot be zoomed in any further.

The image can also be zoomed in and out by selecting the main image and turning the mouse wheel.



### 6.3.2 RGB channel view

The color components (R, G, B) of the color image can be displayed separately.

**1** Select the image.

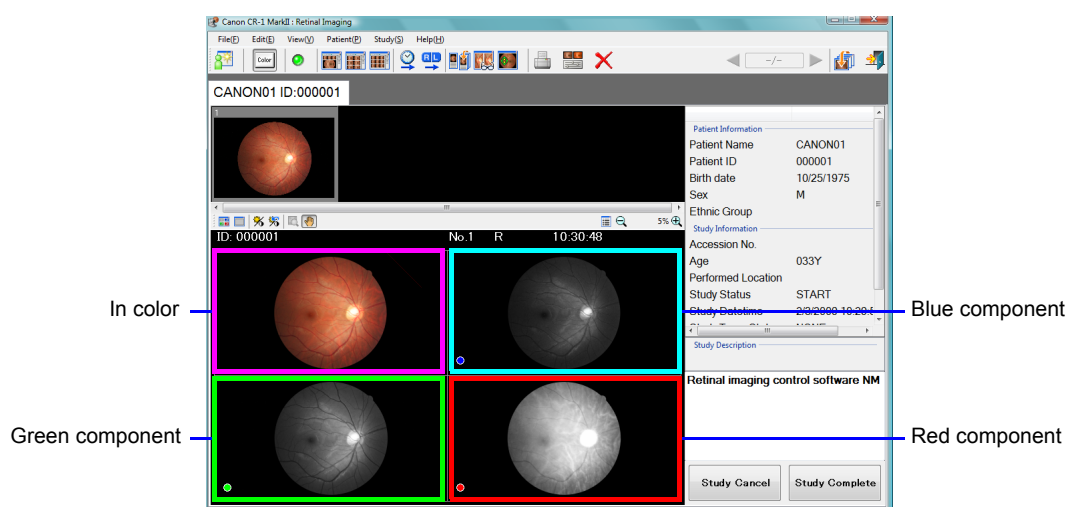
Click the thumbnail image.

**2** Display the RGB split images.

Click the RGB Channel icon.

In addition to the color image, the R (red), G (green), and B (blue) color component images are also displayed.

To restore to the original display, click the Normal View icon.



RGB channel view



#### Available image operations on RGB channel view images

The following image operations are available on RGB channel view images.

- Zooming (see page 48)
- Contrast/brightness adjustment (see page 50)
- Moving the displayed area (see page 51)

Whenever the zooming in/out and moving operations are used, they are applied to all split-screen images.



#### Display of the Reject and Study Logs icons

The Reject and Study Logs icons are displayed for color images only.

### 6.3.3 Contrast/brightness adjustment

The contrast and brightness of the main image can be adjusted.

**1** Select the image.

Click the thumbnail image.

**2** Adjust the contrast or brightness.

Click the Contrast/Brightness icon.

The adjustment cursor is displayed. While the left-mouse button is held down, the contrast value (C) and brightness value (B) are displayed at the top right of the image.

Perform the operation below while holding down the left-mouse button.

Adjustment item	Operation
Brightness	Move up: Brightness increases. Move down: Brightness decreases.
Contrast	Move to right: Contrast increases. Move to left: Contrast decreases.



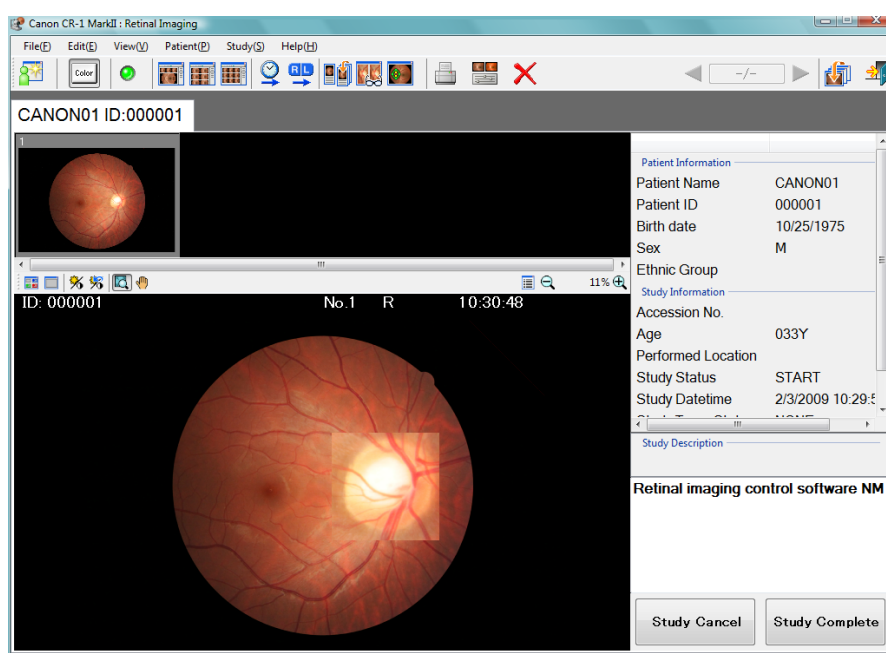
**Images where contrast or brightness were adjusted**

To return to the image before adjustment, click the Reset Contrast/Brightness icon. The adjustment value is reset when the study is closed.

### 6.3.4 Enlarging an area of the image (Loupe)

A part of an image can be enlarged for display.

- 1 Select the image.  
Click the thumbnail image.
- 2 Enlarge a part of an image for display.  
Click the Loupe icon, and then click over the main image with the mouse.  
To move the enlargement position, move the mouse while holding down the left-mouse button.  
To restore to the original image, release the left-mouse button.  
To return to the original pointer, click the Hand icon.



Enlarged display



#### Enlargement display size and magnification rate

The displayed size and magnification rate are determined by the settings on the Loupe tab. See 7.9.5 Loupe tab (see page 106) for details.

### 6.3.5 Moving the displayed area

The displayed area of an enlarged image can be moved in the main image.

- 1 Click the Hand icon.
- 2 Move the mouse over the main image that is being enlarged while holding down the left-mouse button.

## 6.4 Comparing studies

A comparison view of studies can be displayed.

**1** Open a study to be compared.

To compare with a current study, click the Study tab.

To compare with a study log, click the Study Logs icon, select from the Temporarily Saved list or Study Log Files list, and click [OK].

**2** Select the image.

Click the thumbnail image.

**3** Display the Compare Studies screen.

Click the Compare Studies icon.

The same screen is displayed on the right and left.

**4** Display the study logs.

Click the Study Logs icon.

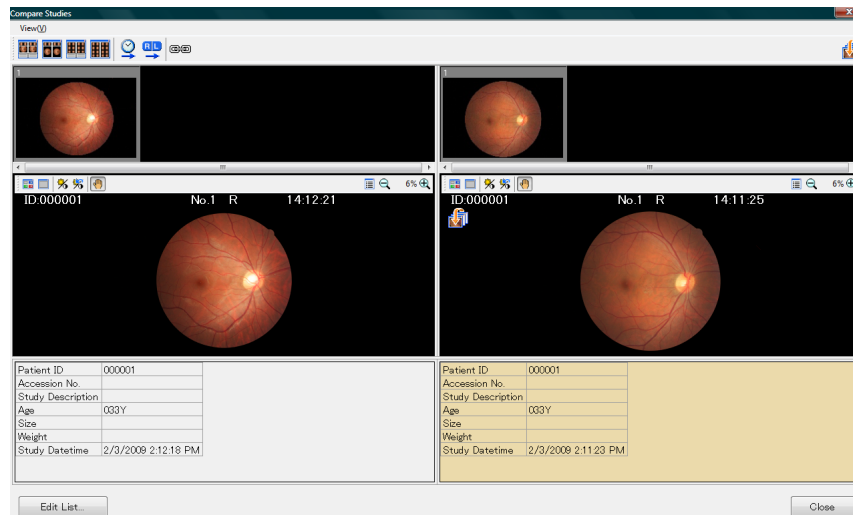
**5** Select the study log and display an image of the study log.

Select the study log from the list, and click [OK].

The selected study log is displayed on the right side of the Compare Studies screen.

To change the study log that is compared, repeat the steps 4 and 5. The study displayed on the right side is replaced.

Studies cannot be displayed unless they are saved.











Compare Studies screen

---

**Note:** Images cannot be taken when the Compare Studies screen is displayed.

---

## 6.4.1 Image display icon

Icon	Icon name	Function
	Main, Thumbnails, and Study Information	The main and thumbnail images are displayed together with the study information.
	Main and Thumbnails	The main and thumbnail images only are displayed, and the study information is not displayed.
	Thumbnails and Study Information	The thumbnails are displayed together with the study information.
	Thumbnails Only	The thumbnails only are displayed.
	By Time	The images are displayed in the order that they were taken.
	By RL	The images are displayed in the order of the left/right eye.
	Move/Apply Effects to Both Images	When this option is enabled, an operation applied to the right or left image is applied to the other. When the display is switched between RGB view and normal view, or zoom in and zoom out button operations are performed for one of the image, same operation is applied to the other. Application of an operation to both images is canceled when one of the following operations is performed. <ul style="list-style-type: none"> <li>• Selecting another image</li> <li>• Canceling selection of an image</li> <li>• Opening a different study</li> </ul>
	Study Logs	Study log is opened, and the selected study is displayed at right side.

Menu item	Submenu	Description
View	Hide Rejected Images	The rejected images display can be turned on or off.
	Hide Study Information	The study information screen can be turned on or off.

## 6.4.2 Displayed item setting

The displayed items for the study information can be specified.

Click [Edit List] to display the Edit List screen.

The items where the display setting can be made are the same as the items that can be displayed in the Study Information screen of the main screen.

For details about the setting procedure for the setting items, refer to 7.9.3 Study Info. tab (see page 104).

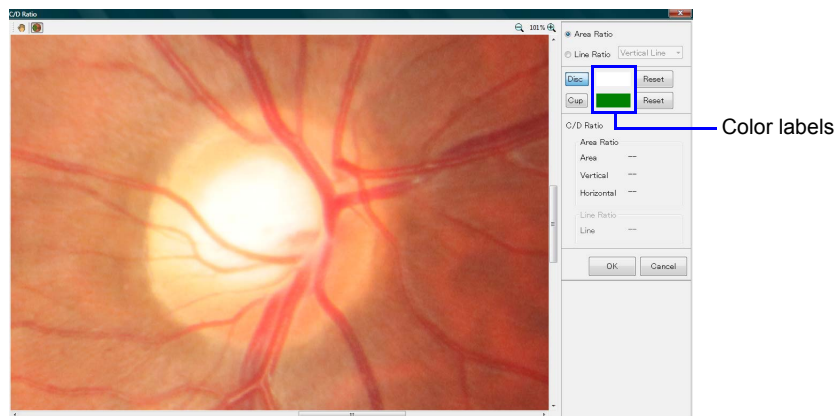
## 6.5 Measuring C/D ratio

The cup-to-disc ratio of the optic nerve papillary area from the image can be measured. Two methods are available: finding the area ratio and finding line ratio.

Note: Photography is not possible on the C/D Ratio screen.

### 6.5.1 Displaying the C/D ratio enlarge screen



- 1 Select the image.  
Click the thumbnail image.
- 2 Open the C/D Ratio screen.  
Click the C/D Ratio icon on the main screen.
- 3 Enlarge the image.  
Move the mouse to the center of the optic nerve papillary area with the enlargement cursor displayed, and then click.  
The image is enlarged with the clicked location as the center.  
To move the image area, use the Hand icon or scroll bar.



C/D Ratio enlarge screen

Button and display item	Description
[Area Ratio]	Check this item to select the area ratio drawing mode.
[Line Ratio]	Check this item to select the line ratio drawing mode.
Line Ratio combo box	Check this item to select a line drawn in a line ratio. Select Vertical Line or Optional.
[Disc]	Press this button to perform the disc drawing.
Disc color label	Click this item to display the color setting screen. The line color of the disc drawing can be set.
[Reset] for Disc	Press this button to reset the disc drawing.
[Cup]	Click this item to display the color setting screen. The line color of the cup drawing can be set.

Button and display item	Description
Cup color label	The line color of the disc drawing can be set.
[Reset] for Cup	Press this button to reset the cup drawing.
Area	The area C/D ratio that is drawn in an area ratio is displayed here.
Vertical	The vertical C/D ratio that is drawn in the area ratio is displayed here.
Horizontal	The horizontal C/D ratio that is drawn in the area ratio is displayed here.
Line	The line ratio is displayed here. Line and Vertical are used together, and so separate values cannot be left.
[OK]	Press this button to save the C/D ratio and close the screen. The drawn color of the cup and disc are saved. The drawing mode that was selected with Area Ratio and Line Ratio is also saved.
[Cancel]	Press this button to close the screen.

Mouse cursor	Name	Description
	Draw cursor	This icon is displayed during draw mode of C/D ratio.
	Initial enlargement cursor	When C/D ratio is opened, this is displayed when enlarging by clicking the mouse.

### 6.5.2 Measuring area ratio

Closed curve on the image can be drawn to measure the area ratio of the disc and cup.

To measure the line ratio, refer to 6.5.3 Measuring the line ratio (see page 57).

- 1 Select the drawing mode of the area ratio.  
Click [Area Ratio].
- 2 Select the disc drawing.  
Click [Disc].
- 3 Draw a disc.  
Click the starting point.  
The drawing is made with the display color that was preset for the color label.
- 4 Click the mouse to plot at least three points at the desired plotting locations.  
Finally, double-click at the last point, or select [Form a Shape] from the right-click menu. A closed curve is connected in the order of the plotted points, and a drawing resembling a disc shape is displayed.



#### Canceling the point that was just selected

Press the Backspace key during drawing to cancel the point that was just selected.

Continued on the following page >>

**5** Draw a cup.  
 Select [Cup] and draw using the same procedure for Disc.

**6** Reshape the disc or cup.  
 After drawing is completed, the shape can be adjusted.  
 If the pointer is brought close to the clicked point, the color of the point changes to gray.  
 The point can be dragged to move it to another location. However, it cannot be moved over points that are already plotted.  
 To edit the drawn line, right-click over a point or line.  
 A red point is displayed on the line.

Right-click menu item	Description
Form a Shape	Select this item to connect the points and draw a closed curve.
Insert the Dot	Select this item to insert a new point and reshape the drawing.
Delete the Dot	Select this item to delete a selected point and reshape the drawing.

**7** The C/D ratio is displayed.  
 Even when reshaping of a cup or disc, the C/D ratio is calculated and displayed to two decimal places.  
 In images where it is already calculated, the previously-calculated value is displayed.

Display item	Description
Area	Ratio of the cup area and disc area
Vertical	Ratio of the heights when drawing is bound by a rectangle
Horizontal	Ratio of the widths when drawing is bound by a rectangle

**8** Save the values and exit the measurement.  
 Click [OK].  
 The Cup and Disc drawing colors and measurement values of the C/D ratio are saved, and the screen is closed.

---

**Note:** Drawing information (points and lines) for the Area and Line ratio measurement will be lost when the C/D Ratio screen is closed.

---



### 6.5.3 Measuring the line ratio

The line ratio can be measured by drawing a vertical line or straight line.

- 1 Display an enlarged screen from the CD ratio screen.
- 2 Insert a check mark in [Line Ratio], and select a vertical line or straight line.
- 3 Select [Disc] or [Cup].
- 4 Click the start point of the drawing on the screen.
- 5 Click at the location of the second point.

The drawing is completed when the second point is clicked.

A straight line is drawn connecting the start point and second point position.



#### Canceling the point that was just selected

Press the Backspace key during drawing to cancel the point that was just selected.

- 6 If necessary, edit the line.

After the cup and disc drawing is complete, the line can be edited.

Place the pointer over the point. The editing can be performed while the color of the point changes.

Item	Operation	C/D ratio line
Vertical Line	Drag a point up or down to change the position of the point. Drag a point to the right or left to move the line from side to side.	Ratio of Cup vertical line and Disc vertical line
Straight Line	Drag a point to move the point freely in any direction.	Ratio of Cup straight line and Disc straight line

- 7 When the drawing of Cup or Disc is completed, the C/D ratio is calculated and displayed.

The value is displayed in the Line under the Line Ratio.

Click [OK].

The Cup and Disc drawing colors and measurement values of the C/D ratio are saved, and the screen is closed.

---

**Note:** Drawing information (points and lines) for the Area and Line ratio measurement will be lost when the C/D Ratio screen is closed.

---

## 6.6 Stereo view

Two images that were taken in the same shooting mode are displayed side by side.

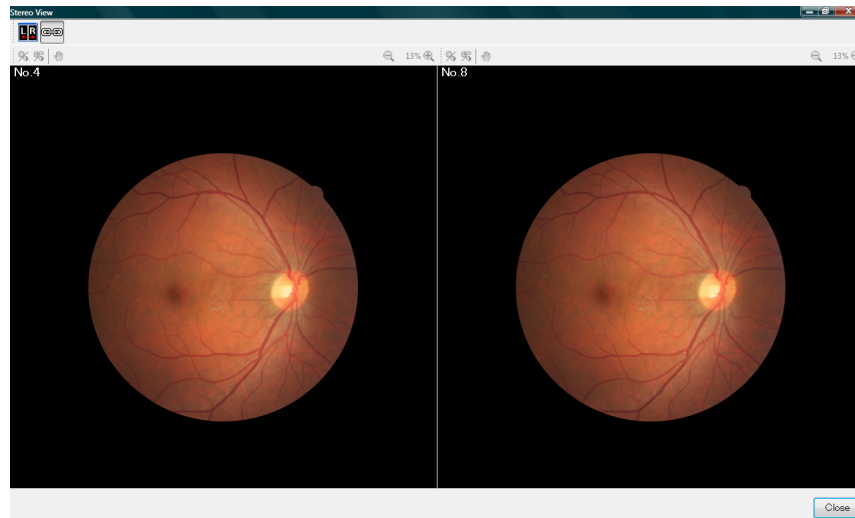
**1** Select the images.

Select the two thumbnail images by clicking them while holding down the Ctrl key on the keyboard.

**2** Open the Stereo View.

Click [Stereo View] in the toolbar, or click [View] > [Stereo View] from the menu bar.

Images cannot be taken while the Stereo View screen is being displayed.






Stereo View screen

**3** Adjust the image.

Use the image operation icons and image toolbar to adjust the images.

Image operation icon/button	Name	Function
	< - - >	Select this item to switch the right and left images.
	Move/Apply Effects to Both Images	This function is enabled when the Stereo View screen is opened. When operation such as moving the displayed area, zoom in/out or changing the magnification rate is performed on the left image, the same effect that was applied to the left image is also applied to the right image. Operations are performed independently on the right and left images when this function is disabled.
	Contrast/Brightness	6.3.3 Contrast/brightness adjustment (see page 50)
	Reset Contrast/Brightness	

Image operation icon/button	Name	Function
	Hand	6.3.5 Moving the displayed area (see page 51)
	Reduce	6.3.1 Zooming (see page 48)
	Enlarge	
%	Display Magnification	

#### 4 Exit Stereo View.

Click [Close].

The Stereo View information below is recorded when the Stereo View screen is closed:

- Display image position
- Size

## 6.7 Printing images

Images can be printed out using the 7.10 Print (see page 109) settings.

The available printing methods are simple printing and Easy-PhotoPrint EX.

Before printing the images, set the printing parameters.

### 6.7.1 Adjusting the printing parameters

Printing parameters for images can be adjusted.

The adjustment here are applied only when images are printed, and will not be applied to the parameters of the images themselves.

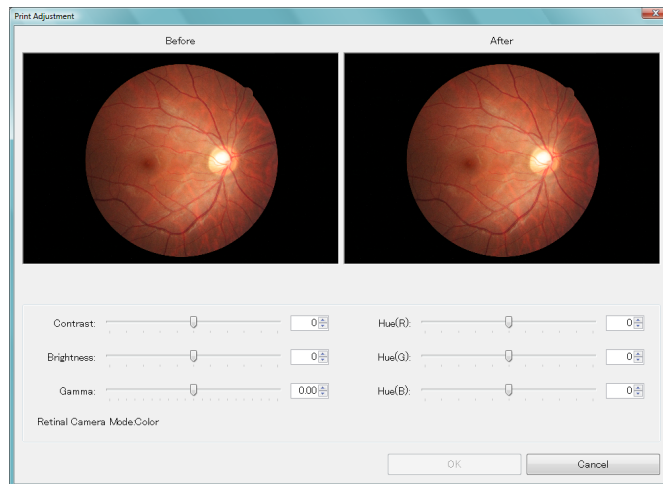
When the parameters of the images themselves are to be changed, refer to 6.8 QA (see page 65).

**1** Select the image.

Click the thumbnail image.

**2** Display the Print Adjustment screen.

On the menu bar, click [File] > [Print Adjustment...] in this order.



Print Adjustment screen

**3** Adjust the parameters.

The adjusted parameters are applied to all the images in the retinal camera mode which has been selected.

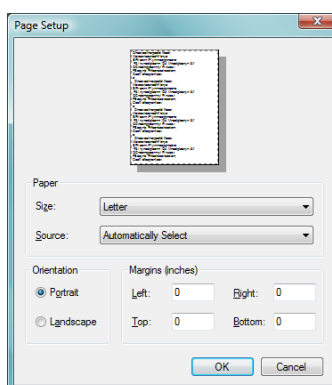
Parameter	Operation
Contrast	Any contrast level from -50 to 50 can be set. Drag the slider or click ▲ or ▼.
Brightness	Any brightness level from -50 to 50 can be set. Drag the slider or click ▲ or ▼.
Gamma	Any gamma level from -1.00 to 1.00 can be set. Drag the slider or click ▲ or ▼.
Hue (R)	Any hue level from -50 to 50 can be set. Drag the slider or click ▲ or ▼.
Hue (G)	
Hue (B)	

- 4 Save the settings.  
Click [OK].

### 6.7.2 Using simple printing to print images

The simple printing function of the control software is used to print images with the printing parameters that were adjusted in 6.7.1 Adjusting the printing parameters (see page 60).

- 1 Turn on the power of the printer.
- 2 Select the image.  
Click the thumbnail image.  
To select multiple images, click the images while holding down the Ctrl key on the keyboard. To select a range of images, click the images while holding down the Shift key on the keyboard.
- 3 Open the Page Setup screen.  
On the menu bar, click [File] > [Page Setup...] in this order.



Page Setup screen example

- 4 Set the paper size, printing orientation, margin, printer, and other parameters.



MEMO

#### Setting values

When starting this software, the setting values for the default printer are used.

If the paper, printing orientation, and printer settings are changed, the only setting value saved after restarting is the margin setting.

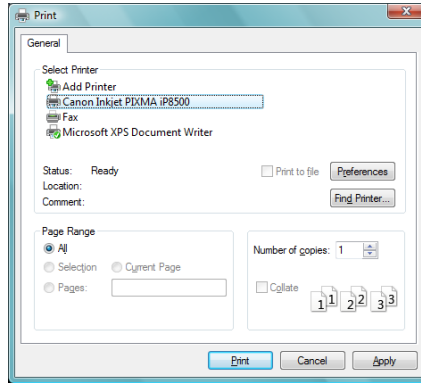
**5** Proceed with the printing.

On the File menu bar, click [File] > [Print] in this order.

When the Print screen is displayed, click [Print] button.

The output of the selected image and Print information to the printer is started.

The screen returns to the original window after image output to the printer is completed.



Print screen

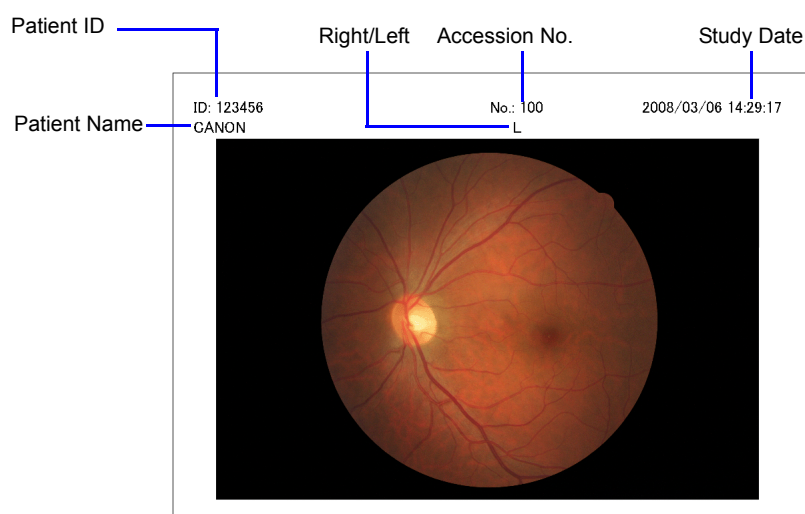


**Simple printing with the Print icon**

To print using simple printing when clicking the Print icon, remove the check mark from the Print with Easy-PhotoPrint EX option in the print settings (see page 109).

Items	Details
Patient ID	“ID:” is added at the start.
Patient Name	This is printed with separators “^” added between data entry items in the following order: Last Name^First Name^Middle Name^Prefix^Suffix.
Accession No.	“No. :” is added at the start.
Right/Left	R, L
Study Date	OS short date format + Space + H:mm:ss

Print information



Print layout example

**Printing information**

If a part of printing information item cannot be laid out in the provided space, ellipsis (...) are shown before the Patient ID and Accession No. and after the Patient Name and Study Date to indicate that information is omitted. The number of possible output characters varies depending on the paper size, paper orientation, and margin settings.

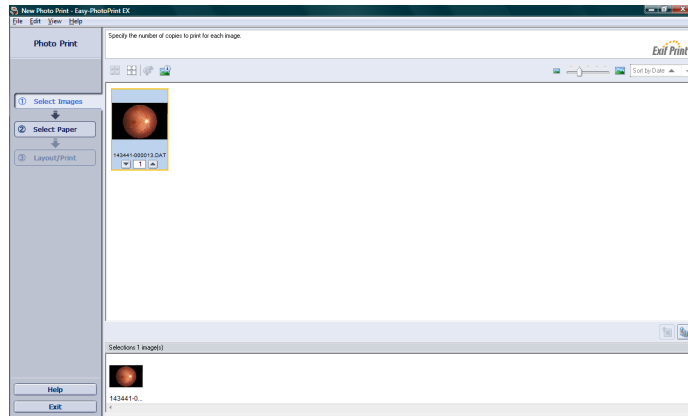
### 6.7.3 Using Easy-PhotoPrint EX to print images

The images are printed using Easy-PhotoPrint EX with the printing parameters that have been adjusted in 6.7.1 Adjusting the printing parameters (see page 60).

**Note:** To print with Easy-PhotoPrint EX, install the software in advance.

- 1 Turn on the power of the printer.
- 2 Select the image.  
Click the thumbnail image.  
If a multiple number of images are to be selected, click the images while pressing the Ctrl key on the keyboard; if a range of images is to be selected, click the images while pressing the Shift key on the keyboard.

- 3 Open the Easy-PhotoPrint EX screen.  
On the File menu bar, click [File] > [Easy-PhotoPrint EX] in this order.  
The selected image is displayed as the printing image.



Easy-PhotoPrint EX screen



**Printing with the Print icon**

To print using Easy-PhotoPrint EX when clicking the Print icon, add a check mark to the Print with Easy-PhotoPrint EX option in the print settings (see page 109).

- 4 Set the Select Images tab.  
On the Select Images tab, click the image.
- 5 Set the Select Paper tab.  
Click the Select Paper tab, and click the Paper Size and Media Type.
- 6 Set the Layout/Print tab.  
Click the print layout.
- 7 Proceed with the printing.  
Click the Print button.  
After printing is completed, click the Exit button.  
The Easy-PhotoPrint EX window closes, and the control software screen is restored.

---

**Note:** Printing may be aborted automatically when trying to print large spool size images or when there is little available hard disk space. In this case, no error message is displayed.  
To print large spool size images, click [File]>[Preferences...] on the Easy-PhotoPrint EX screen.

Next, open the Print tab of the Preferences screen, and add a check mark to “Spool print job page by page” option and perform printing.

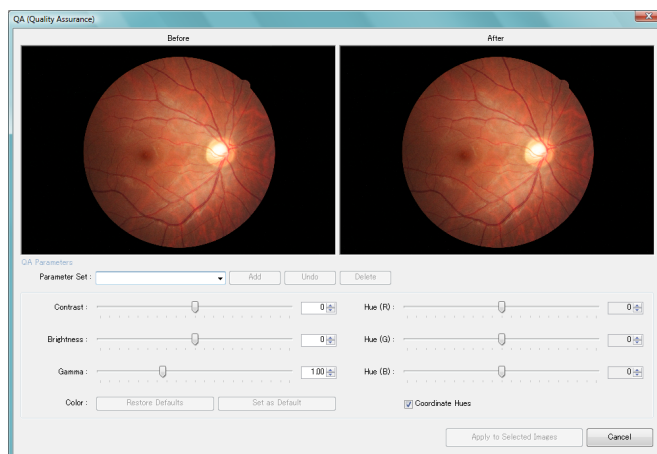
---



## 6.8 QA

Take the steps below to adjust the images.

- 1 Select the image.  
Click the thumbnail image.
- 2 Display the QA (Quality Assurance) screen.  
Click the QA icon.



QA (Quality Assurance) screen

- 3 Set the parameters.

If the parameters have been saved, click **Parameter Set** ▼, and click the name of the parameter set from the list shown.

To set a new parameter, refer to the table below, and set it.

Parameter	Operation
Contrast	Any contrast level from -100 to 100 can be set. Drag the slider or click ▲ or ▼.
Brightness	Any brightness level from -150 to 150 can be set. Drag the slider or click ▲ or ▼.
Gamma	Any gamma level from 0.01 to 3.00 can be set. Drag the slider or click ▲ or ▼.
Hue (R)	Any hue level from -100 to 100 can be set. Drag the slider or click ▲ or ▼.
Hue (G)	
Hue (B)	
Coordinate Hues	When this is checked, as soon as the value of one of the hues is changed, the values of the other two hues will also be changed so that the sum total of the values will be zero.
[Restore Defaults]	When this is clicked, the current parameters are set to the default values for the retinal camera mode of the adjusted images.
[Set as Default]	

Continued on the following page >>



**Maintenance of the parameter set**

To save a new parameter set, enter the name in the Parameter Set column using up to 32 characters, and click **[Add]**.

To delete an already saved parameter set, click the name of the Parameter Set, and click **[Delete]**.

In cases where an already saved parameter set has been selected and then changed, click **[Update]** to overwrite the existing parameter set with the current setting or click **[Undo]** to return to the saved setting.

**4** Apply the setting.

Click **[Apply to Selected Images]**. The screen now closes, and the parameter is applied.

## 6.9 Rejecting images

Images set to be rejected are not transferred.

All other operations can be performed as usual.

### 1 Select the image.

Click the thumbnail image.

### 2 Set the image to reject.

Click the Reject icon. A red “×” will appear at the bottom right of the thumbnail and main images.

When the Reject icon is clicked again, the red “×” is cleared and the rejection is canceled.

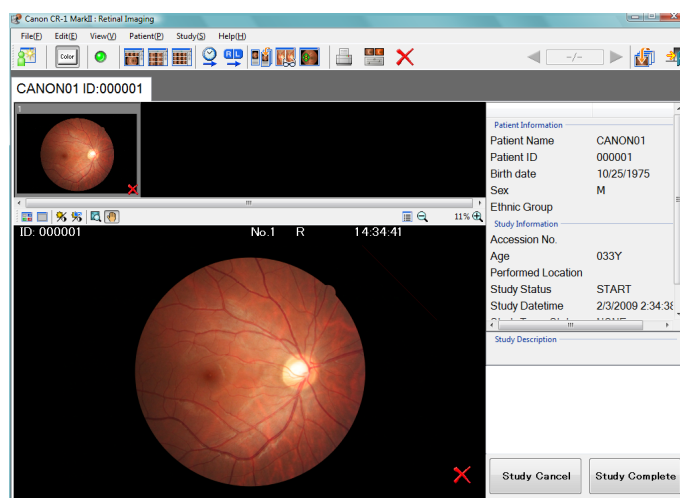


Image to be rejected



MEMO

### Image rejection operation

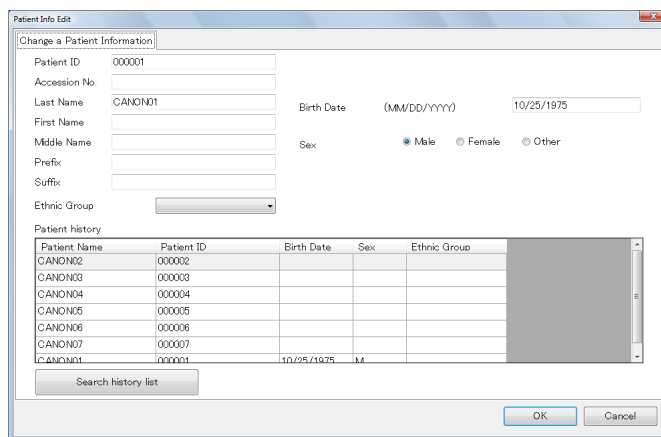
The image rejection operation cannot be performed if [View] > [Hide Rejected Images] is selected from the menu bar to hide the rejected images.

## 6.10 Changing the patient information

The patient information input manually or with a magnetic card or barcode reader can be changed. The patient information acquired by the list or worklist input cannot be changed.

**1** Display the Patient Info Edit screen.

On the menu bar, click [Patient] > [Change a Patient Information...] in this order.



Patient Info Edit screen

**2** Input the patient information.

For details on the input information, refer to inputting the study information (see page 11). In this case, there is no Study Description.

---

**Note:** In the Patient Info Edit screen, the Essential Data, Input-Disabled Data and Input Format settings in the Manual Input tab settings (see page 83), and the Essential Data setting in the Mag Barcode Input tab (see page 86) are disabled. Please use care when editing the patient information in this screen.

---

**3** Change the patient information.

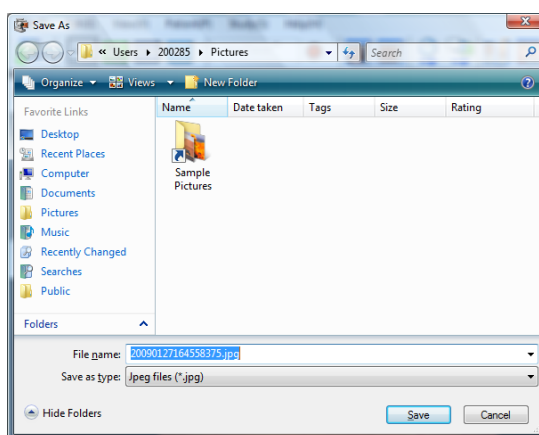
Click [OK].

## 6.11 Saving as JPEG files

The images displayed on the main screen can be saved as JPEG files.

### 6.11.1 Save as

- 1 Select the image.  
Click the thumbnail image.
- 2 Display the save screen.  
Click [File] > [Save As...] from the menu bar.  
The Save As screen is now displayed.



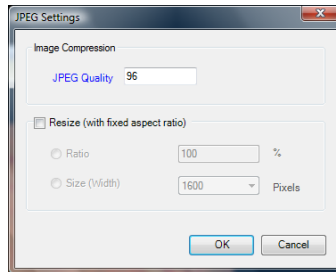
- 3 Select the file name, file type and folder where the image will be saved.  
The default settings are given below.

Setting item	Description
File name "Format"	Date + time "yyyymmddhhmmssfff.jpg" (year/month/day/hours/minutes/seconds/milliseconds when the selected file was displayed on the Save As screen)
Save as type	Jpeg files (*.jpg)
Save in (Folder where the image will be saved)	Windows XP: "My Pictures" Windows Vista: "Pictures"

- 4 Save JPEG file.  
Click [Save].

### 6.11.2 JPEG settings

- 1 Display the JPEG Settings screen.  
Click [File] > [JPEG Settings...] from the menu bar.  
The JPEG Settings screen is displayed.



JPEG Settings screen

- 2 Set the JPEG Quality and Resize settings for the JPEG files.

Input item	Operation	
JPEG Quality	Input a number from 1 to 100. “100” represents the highest quality.	
Resize (with fixed aspect ratio)	Check this to change the image size while keeping the aspect ratio fixed.	
	[Ratio]	Input a number from 1 to 100 to specify to what percentage the width and height of the images are to be reduced from the original.
	[Size (Width)]	Click the width of the image after reduction, and select.

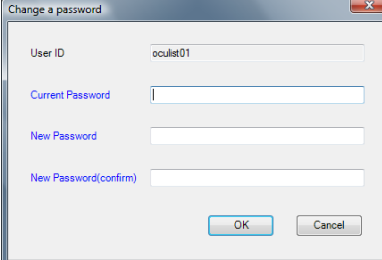
- 3 Apply the settings.  
Click [OK].

## 6.12 Changing the password

Take the steps below to change the password of the user who is currently logged in.

- 1 Display the Change a password screen.

On the menu bar, click [File] > [Change a Password...] in this order.

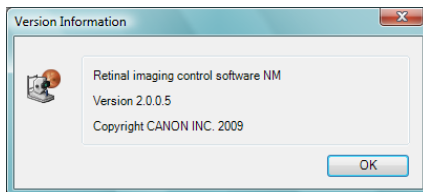


Change a password screen

- 2 Input the password.  
Input no more than 16 characters for the Current Password, New Password and New Password(confirm).
- 3 Change the password.  
Click [OK].

### 6.13 Displaying the version information

On the menu bar, click [Help] > [Version] in this order. The Version Information screen is displayed.



Version Information screen

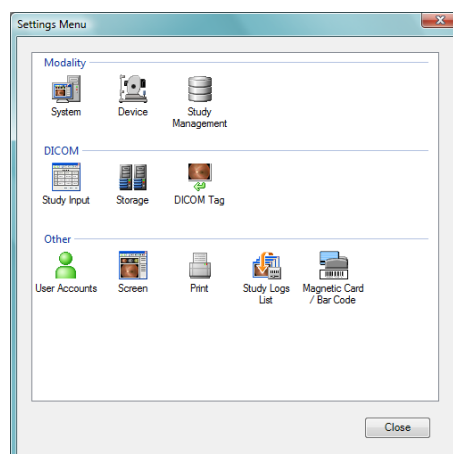


## 7. Settings

### 7.1 Settings Menu screen

On the login screen, input the User ID and Password with which the Privilege (see page 100) has been set to the Administrator, and click [Settings]. The Settings Menu screen is displayed.

To exit the Settings Menu screen, click [Close].



Settings Menu screen

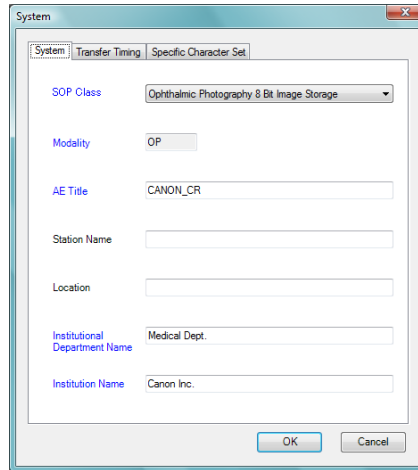
Icon name	Setting contents	Reference chapter and page
System	Used to perform the settings for the DICOM information and image output.	7.2 System (see page 74)
Device	Used to perform the settings for the retinal camera and digital camera.	7.3 Device (see page 77)
Study Management	Used to perform the settings for image saving.	7.4 Study Management (see page 80)
Study Input	Used to perform the settings for the study input.	7.5 Study Input (see page 82)
Storage	Used to set the output destination of the images.	7.6 Storage (see page 92)
DICOM Tag	Used to perform the settings for the DICOM information.	7.7 DICOM Tag (see page 97)
User Accounts	Used to set the user information.	7.8 User Accounts (see page 100)
Screen	Used to perform the settings for the information displayed on the screen.	7.9 Screen (see page 102)
Print	Used to set the printing method.	7.10 Print (see page 109)
Study Logs List	Used to set the search target date on the study logs list.	7.11 Study Logs (see page 110)
Magnetic Card/ Bar Code	Used to perform the settings for the magnetic cards and barcodes.	7.12 Magnetic Card/Bar Code (see page 110)

## 7.2 System

The System screen is displayed when the System icon is clicked.

Click the tabs, and set the parameters.

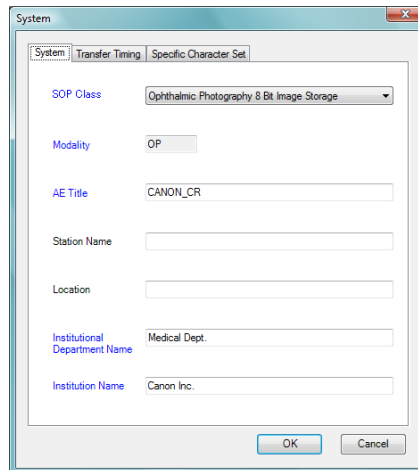
To save the settings and exit the System screen, click [OK].



System screen

### 7.2.1 System tab

Used to perform the settings for the DICOM information.



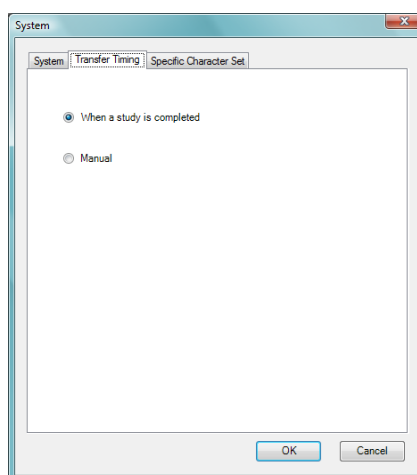
System tab

Item	Operation
SOP Class	Click ▼, and select SOP Class from the list.
Modality	This is displayed automatically in accordance with the SOP class setting. VL Photographic Image Storage: XC Secondary Capture Image Storage: OT Ophthalmic Photography 8 Bit Image Storage: OP
AE Title	Input no more than 16 characters. (Required) The backslash (\) cannot be input.

Item	Operation
Station Name	Input no more than 16 characters.
Location	The backslash (\) cannot be input.
Institutional Department Name	Input no more than 64 characters. (Required)
Institution Name	The backslash (\) cannot be input.

### 7.2.2 Transfer Timing tab

Select the timing at which the images are to be transferred.

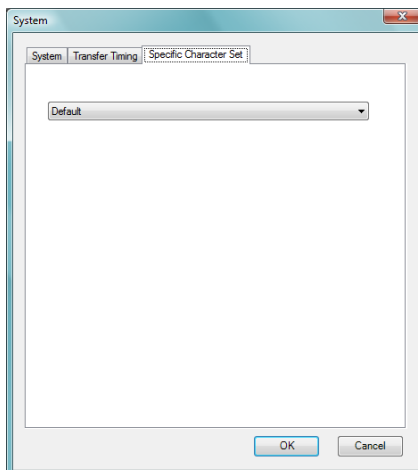


Transfer Timing tab

Item	Operation
When a study is completed	When a study is completed, images are automatically output to the storages which has been set in 7.6 Storage (see page 92).
Manual	When a study is completed, images are not automatically output. When outputting the images, refer to 5.1.3 Transferring studies (see page 33).

### 7.2.3 Specific Character Set tab

Click ▼ to set the specific character set used for study input and DICOM communication.  
The values corresponding to the selected item are used in Specific Character Set (0008,0005).



Specific Character Set tab

Item	Specific character set tag value
Default	None
Latin-1	ISO_IR 100
Latin-2	ISO_IR 101
Cyrillic	ISO_IR 144
Greek	ISO_IR 126
Latin-5	ISO_IR 148
Japanese <katakana>	ISO_IR 13
Japanese <kanji>	\ISO 2022 IR 87
Japanese <kanji + katakana>	ISO 2022 IR 13\ISO 2022 IR 87
Japanese <kanji + katakana (code extension)>	\ISO 2022 IR 13\ISO 2022 IR 87
Japanese <katakana (code extension)>	\ISO 2022 IR 13



MEMO

#### Setting of specific character sets

The setting for the specific character set needs to be made to match the connected system and language keyboard that is used. English OSs do not support Japanese input.

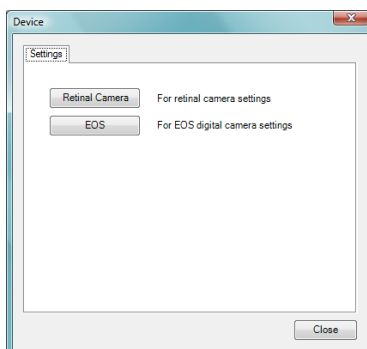
If transfer is performed from a study log after changing the setting, the setting is not applied. In DICOM transfer, the specific character set designated during study is used.

## 7.3 Device

The Device screen is displayed when the Device icon is clicked.

Click the buttons to display the setting screens.

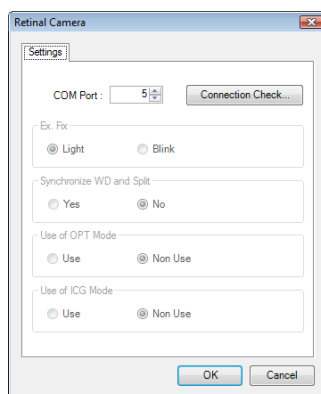
To save the settings and exit the Device screen, click [Close].



Device screen

### 7.3.1 Retinal Camera Settings

The Retinal Camera screen is displayed when [Retinal Camera] is clicked.



Retinal Camera screen

#### 1 Set the COM Port.

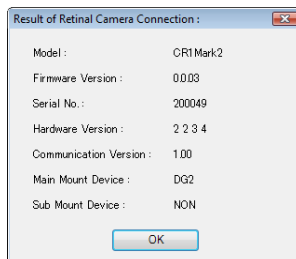
Click ▲ or ▼, and select a number from 1 to 16 for the port where the connection has been made with the retinal camera.

**2** Check the connection with the retinal camera.

Click [Connection Check...].

If the connections have been made properly, the Result of Retinal Camera Connection screen is displayed.

When [OK] is clicked, the Result of Retinal Camera Connection screen is closed.



Result of Retinal Camera Connection screen



**When an Error screen has appeared**

When an Error screen has appeared, check the following.

- Is the power of the retinal camera on?
- Are the retinal camera and computer connected correctly?
- Has the port number been set correctly?

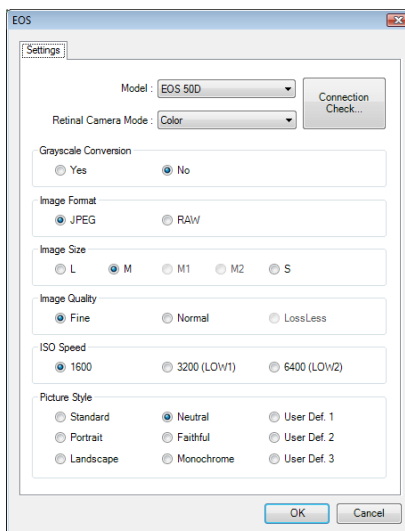
**3** Save the settings.

On the Retinal Camera screen, click [OK].

### 7.3.2 EOS Settings


The EOS screen is displayed when [EOS] is clicked.

Depending on the conditions, some parameters cannot be selected. For details on the parameters, refer to the instruction manual of the digital camera.



EOS screen

## 1 Perform the EOS settings.

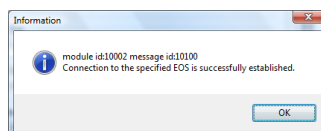
Item	Operation
Model	Click  , and select the digital camera being used.
Retinal Camera Mode	Color only can be selected.
Grayscale Conversion	Select Yes or No.
Image Format	Select JPEG or RAW.
Image Size	Select the image size. The available image sizes vary depending on the image format and ISO speed.
Image Quality	Select Fine or Normal. The available image resolutions vary according to the image format.
ISO Speed	Select the ISO speed. Select 3200 (LOW1) or 1600 (LOW2) for the low flash intensity photography.
Picture Style	Select Picture Style.

## 2 Check the connection with the EOS.

Click [Connection Check...].

If the connections have been made properly, the Information screen is displayed.

When [OK] is clicked, the Information screen is closed.



Information screen



MEMO

### When an Error screen has appeared

When an Error screen has appeared, check the following.

- Is the power of the retinal camera on?
- Is the power of the digital camera on?
- Are the retinal camera and computer connected by a cable?
- Are the digital camera and retinal camera connected by a cable?

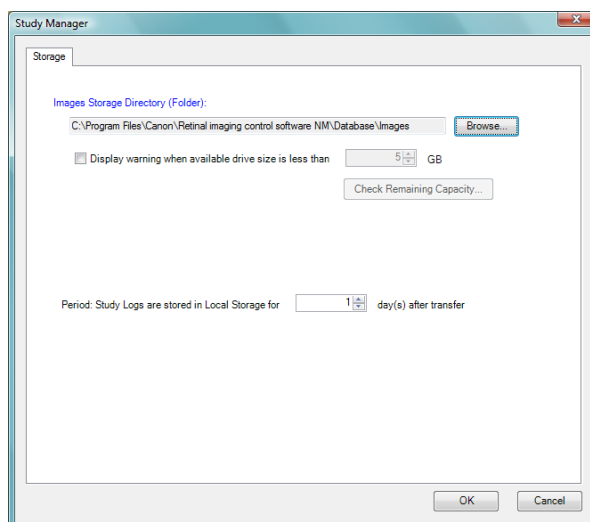
## 3 Save the settings.

On the EOS screen, click [OK].

## 7.4 Study Management

The Storage tab of the Study Manager screen is displayed when the Study Management icon is clicked. On this tab, the storage directory of the images and the save period are set.

To set the storage directory which the images are to be exported as the DICOM or JPEG format file, refer to 7.6 Storage (see page 92).



Study Manager screen (Storage tab)

### 1 Set storage directory.

Item	Operation
Image Storage Directory (Folder)	Click [Browse...], open the Browse For Folder dialog box, and set the folder into which the work data is to be saved. Removable disks and network-related folders cannot be set. In Windows Vista, set access privileges for the saving folder if necessary. (Refer to (2) in 2.1 Software (see page 3).)
Display warning when available drive size is less than	When this is checked, an Warning screen will be displayed when the amount of free space on the hard disk has fallen below the setting. Click ▲ or ▼ to select a setting from 5 to 999. The amount of free space on the hard disk is checked in the following circumstances: <ul style="list-style-type: none"> <li>• When [Browse...] has been clicked and a folder selected</li> <li>• When [OK] has been clicked on the Study Manager screen</li> <li>• When the New Study icon has been clicked on the main screen</li> </ul>

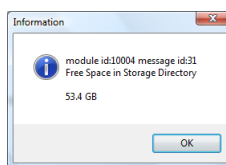


## 2 Check the amount of free space.

Click [Check Remaining Capacity...].

The Information screen is displayed, and the amount of free space on the hard disk is displayed.

When [OK] is clicked, the Information screen is closed.



Information screen



### Concerning the amount of free space required on the hard disk

An Error screen will be displayed if there is less than 1 GB of free space on the hard disk containing the folder which has been set for the storage directory.

## 3 Set the save period.

The save period is the number of days that the study (study information and images) are saved on the computer after the study (study information and images) is transferred to the DICOM storage server or exported as the DICOM or JPEG format files.

Click ▲ or ▼, and select a setting from 0 to 999.

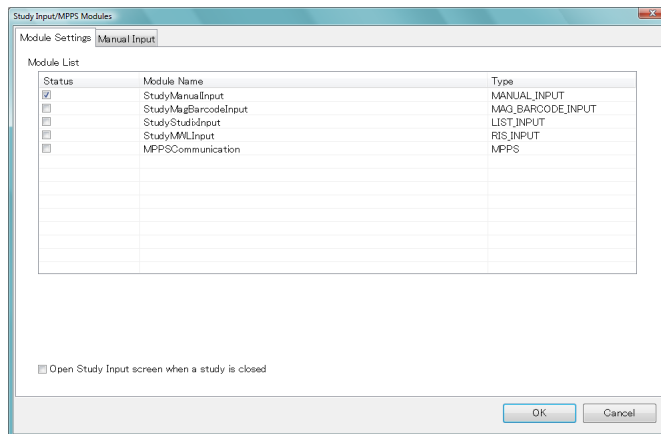
## 4 Save the settings.

On the Study Manager screen, click [OK].

## 7.5 Study Input

When the Study Input icon is clicked, the Study Input/MPPS Modules screen is displayed. Click the tabs, and set the parameters.

To save the settings and exit the screen, click [OK].



Study Input/MPPS Modules screen

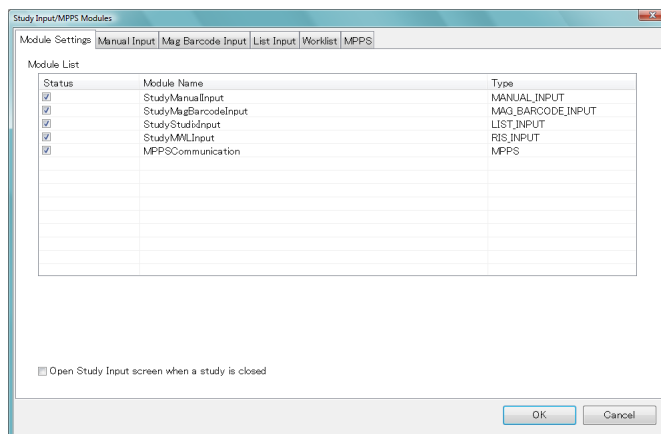
### 7.5.1 Module Settings tab

On this tab, the study input module and study input screen switching settings can be made.

**1** Select the study input modules from the module list.

Add a check mark to the status check box.

The selected module tabs are added in the order of the check marks.



Module Settings tab

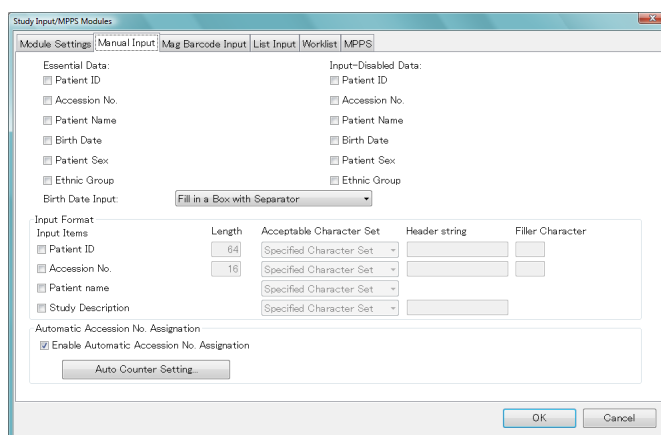
## 2 Select the operation of the Study Input screen when a study ends.

When “Open Study Input screen when a study is closed” is checked, the screens change as shown below.

Assign Accession No. automatically (see page 85)	Screen switching
When enabled	After the taking of images or the study is ended, the Study screen is closed, and the Study Input screen is automatically opened.
When disabled	After the taking of images or the study is ended, the Study screen is closed, then when the Study icon is clicked in 4.2 Inputting the study (see page 10), the Study Input screen for the module entered last is opened.


### 7.5.2 Manual Input tab

When entering patient information manually (see page 11) in the Study Input screen, set essential input data, input-disabled data, the method for entering birth date data and the input format.



Manual Input tab

## 1 Set the Essential Data, Input-Disabled Data, Birth Date Input, and Input Format.

Item	Operation			
Essential Data	Check the items which are to be set as the essential input data. The item names of items set as the essential input data turn blue on the Study Input screen.			
Input-Disabled Data	Check items to prohibit inputting. The Essential Data setting is canceled for the items checked here.			
Birth Date Input	Click  , and select the birth date input method.			
	<table border="1"> <tr> <td>Fill in a Box with Separator</td> <td>To input the year, month and day using / (slashes) into one box.</td> </tr> <tr> <td>Fill in Separate Boxes</td> <td>To input the year, month and day into separate boxes.</td> </tr> </table>	Fill in a Box with Separator	To input the year, month and day using / (slashes) into one box.	Fill in Separate Boxes
Fill in a Box with Separator	To input the year, month and day using / (slashes) into one box.			
Fill in Separate Boxes	To input the year, month and day into separate boxes.			

Continued on the following page >>

Item	Operation	
Input Format (Input item settings)	Check the items to set the input format.	
	Patient ID	Specify the length, input character type, header character string, and digit filling characters.
	Accession No.	
	Patient Name	Select the input character type.
	Study Description	Specify the input character type and header character string.
Input Format	Length	Specify the length of the input character string. Input the Patient ID in 64 characters or less and the Accession No. in 16 characters or less. If nothing is entered, the Patient ID has a length of 64, and the Accession No. has a length of 16.
	Acceptable Character Set	Click <input type="checkbox"/> to select the available character type from the list.
	Header string	Specify the character string added to the left side of input values. Input the Patient ID and Study Description in 64 characters or less, and input the Accession No. in 16 characters or less. (The backslash (\) cannot be input in either one.)
	Filler Character	Specify the character that is added to an input character string when it is less than the specified length.

Note: The check for input format is valid in the Manual Input screen only. No check for input format is made in the Patient Info Edit screen or in the Study Description input section of the Study screen.  
Therefore, be careful when editing patient information after a study is started.

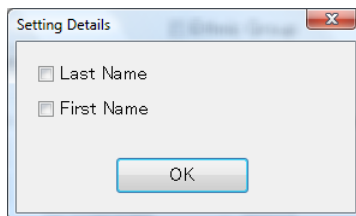


**When a check mark is inserted for Patient Name as an essential item**

If a check mark is inserted for Patient Name as an essential item, the Setting Details screen will open.

Insert a check mark for Last Name and/or First Name.

The item with a check mark is displayed in blue on the Study Input screen.



## 2 Make the setting for the Automatic Accession No. Assignment menu.

To use the Automatic Accession No. Assignment menu, insert a check mark for **Enable Automatic Accession No. Assignment**.

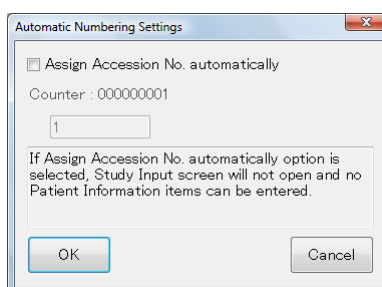
When a check mark is inserted, the [Auto Counter Setting...] is enabled, and the automatic numbering setting is enabled.

The automatic numbering setting can also be made from the Study menu of the main screen.

## 3 Open the Automatic Numbering Settings screen.

Click the [Auto Counter Setting...].

The Automatic Numbering Settings screen is displayed.



Automatic Numbering Settings screen

## 4 Set the automatic numbering items.

After the settings are complete, click [OK].

Item	Operation
Assign Accession No. automatically	Insert a check mark to use the automatic numbering setting.
Counter ****	Enter the counter number of the accession number assigned when the Study Input screen is opened. The valid range is from 0 to 999,999,999. The displayed value **** is the current counter value.



### To enable automatic numbering

Check marks must be inserted for the “Enable Automatic Accession No. Assignment” and for the “Assign Accession No. automatically” in the Automatic Numbering Settings screen to enable the automatic numbering function.



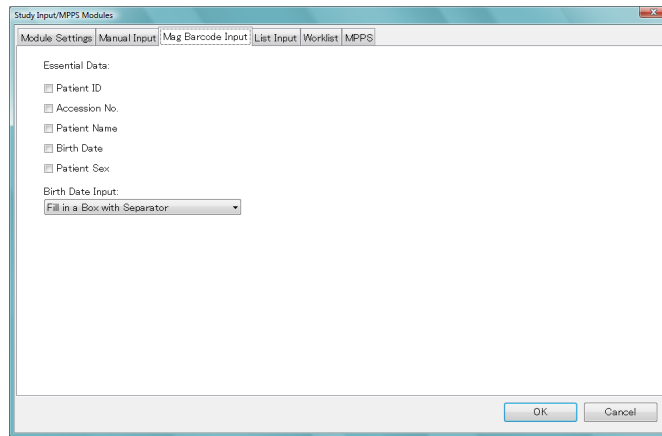
### Automatic numbering function and the Study Input screen

When the automatic numbering function is enabled, the Study Input screen can no longer be opened, and patient information other than the Accession No. cannot be input.

To input patient information, on the main menu, select Menu > [Study] > [Set Auto Numbering] to disable the automatic numbering function.

### 7.5.3 Mag Barcode Input tab

Set the input method for the essential items and birth date during input from a magnetic card/barcode.

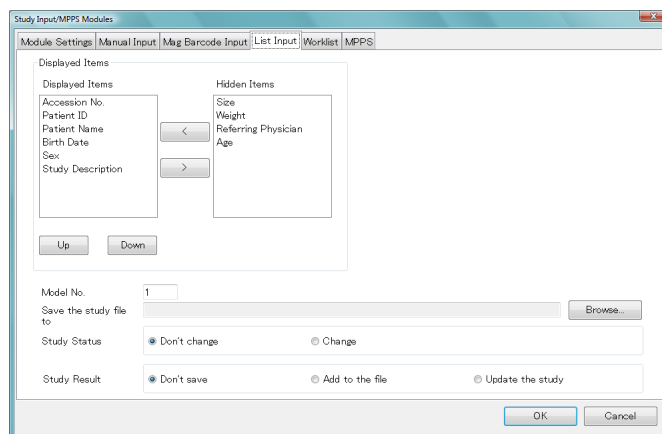


Mag Barcode Input tab

Item	Operation				
Essential Data	Check the items which are to be set as the essential input data. The item names of items set as the essential data on the Study Input screen turns blue.				
Birth Date Input	Click ▼, and select the birth date input method.				
	<table border="1"> <tr> <td>Fill in Separate Boxes</td> <td>Input the year, month and day into separate boxes.</td> </tr> <tr> <td>Fill in a Box with Separator</td> <td>Input the year, month and day using / (slashes) into one box.</td> </tr> </table>	Fill in Separate Boxes	Input the year, month and day into separate boxes.	Fill in a Box with Separator	Input the year, month and day using / (slashes) into one box.
Fill in Separate Boxes	Input the year, month and day into separate boxes.				
Fill in a Box with Separator	Input the year, month and day using / (slashes) into one box.				

### 7.5.4 List Input tab

This sets the study screen using list input.



List Input tab

- 1 Select the items to be displayed in the List Input tab on the Study Input screen. To move an item, select the item, and then click ◀ or ▶.

**2** Set the display order of the Displayed Items.

Items in the Displayed Items are displayed in order from the top of the list starting from the left side. To change the display order, select the item, and click [Up] or [Down].

**3** Set the Model No.

Input a number from 1 to 99 for identifying the camera performing the study. The input number can be saved to the study file (ccrhis.his) and study history file (ccrhis.hr).

**4** Set the storage of the study file.

Click [Browse...] to browse and set the folder where the study file will be saved.

**5** Select the Study Status.

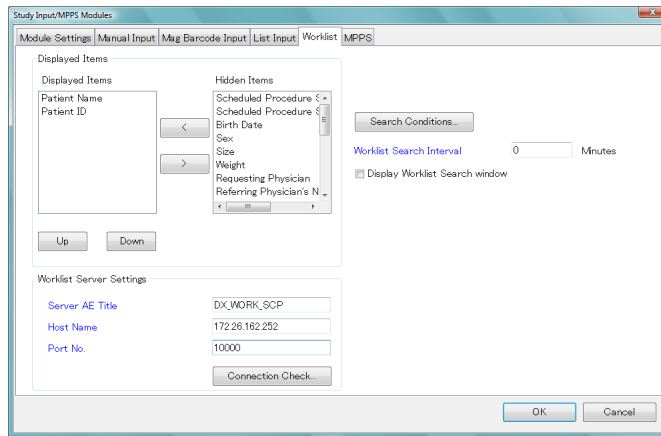
Item	Function
Don't change	The study status in the study file (ccrhis.his) when starting and completing a study is not changed.
Change	The study status in the study file (ccrhis.his) when starting and completing a study is changed according to the conditions.

**6** Select the Study Result.

Item	Function
Don't save	The study results are not recorded to the study history file (ccrhis.hr) when completing a study.
Add to the file	The study results are added to the study history file (ccrhis.hr) when completing a study.
Update the study	The study results of the study history file (ccrhis.hr) are overwritten when completing a study.

### 7.5.5 Worklist tab

This screen is displayed when the Worklist tab is clicked.



Worklist tab screen

#### 7.5.5.1 Setting the display items

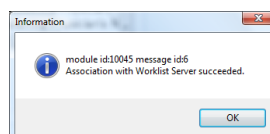
- 1 Select the items to be displayed on the Worklist tab (see page 19).  
To add or delete a display item, select the item, and then click  or .
- 2 Set the display sequence of the Displayed Items.  
The items on the Displayed Items appear from the left of the list in sequence from the top.  
To change the display sequence, select the item, and then click [Up] or [Down].

#### 7.5.5.2 Performing the Worklist Server Settings

- 1 Set the communication parameters.

Item	Operation
Server AE Title	Input the title using not more than 16 single-byte alphanumeric and symbols. (Required) The backslash (\) cannot be input.
Host Name	Input no more than 32 characters for the IP address or host name. (Required)
Port No.	Input a number from 0 to 65535 as the port number. (Required)

- 2 Check the connections with the server.  
Click [Connection Check...].  
If the connections have been made properly, the Information screen is displayed.  
When [OK] is clicked, the Information screen is closed.



Information screen





### When the Warning screen is displayed

Check out the following when the Warning screen is displayed.

- Is the network operating properly?
- Is the server working properly?

#### 7.5.5.3 Setting the search conditions

Take the steps below to set the default values of the Worklist Search screen (see page 20).

#### 1 Click [Search Conditions...].

Search Conditions screen is displayed.

#### 2 Set the Search Conditions : Date.

Select the date search condition, and input the condition.

Based on the input condition, studies with the Scheduled Procedure Step Start Date (0040,0002) or Scheduled Procedure Step Start Time (0040,0003) are searched.

If no conditions have been input, the search conditions will not be set.

Item	Operation
Time	The search is conducted using the range which has been set with the current time serving as the reference. Input a number from 1 to 24.
Range of Date (MM/DD/YYYY)	The search is conducted using a period extending from the start date to the end date. Select the dates in the range extending from 1/1/1870 to 12/31/9999.
Range of Days	The search is conducted using the range which has been set with the current date serving as the reference. Input a number below 999.

Continued on the following page >>

**3** Set the Search Conditions : DICOM Tag Keyword.

Set the search tag in the list box on the left.

Input the value in the text box on the right. An asterisk (\*) can be used as a wild card.

Search Conditions : DICOM Tag Keyword	Operation
AE Title (00400001)	Input no more than 16 bytes.
Scheduled Station Name (00400010)	Input no more than 16 characters.
Modality (00080060)	Input no more than 16 bytes.
Patient ID (00100020)	Input no more than 64 characters.
Scheduled Performing Physician's Name (00400006)	If the classification of the Component Group is to be used for the input, use the equal sign (=) as the delimiter. First=Second=Third First: Input no more than 64 characters, Second and Third: No more than 63 characters
Scheduled Procedure Step Location (00400011)	Input no more than 16 characters.
Patient Name (00100010)	If the classification of the Component Group is to be used for the input, use the equal sign (=) as the delimiter. First=Second=Third First: Input no more than 64 characters, Second and Third: No more than 63 characters
Accession No. (00080050)	Input no more than 16 characters.
Requested Procedure ID (00401001)	Input no more than 16 characters.

**4** Save the settings for the search conditions.

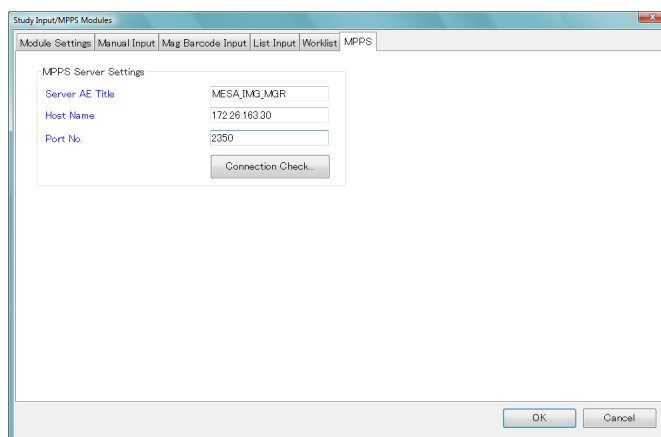
Clicking [OK] saves the settings and closes the Search Conditions screen.

**5** Set the Worklist Search Interval.

Item	Operation
Worklist Search Interval	When searching for a worklist while the Study Input screen is displayed, input a number from 0 to 60 as the interval after which the worklist is to be automatically searched again. (Required) If 0 has been input, the worklist will not be searched again.
Display Worklist Search window	Check this if the Worklist Search screen is to be displayed automatically when the Study Input screen is displayed or when the Worklist tab has been selected.

### 7.5.6 MPPS tab

This screen is displayed when the MPPS tab is clicked.



MPPS tab

- 1 Set the communication parameters.

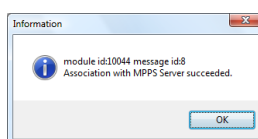
Item	Operation
Server AE Title	Input the title using not more than 16 characters. (Required) The backslash (\) cannot be input.
Host Name	Input no more than 32 characters for the IP address or host name. (Required)
Port No.	Input a number from 0 to 65535 as the port number. (Required)

- 2 Check the connections with the server.

Click [Connection Check...].

If the connections have been made properly, the Information screen is displayed.

When [OK] is clicked, the Information screen is closed.



Information screen



MEMO

#### When the Warning screen is displayed

Check out the following when the Warning screen is displayed.

- Is the network operating properly?
- Is the server working properly?

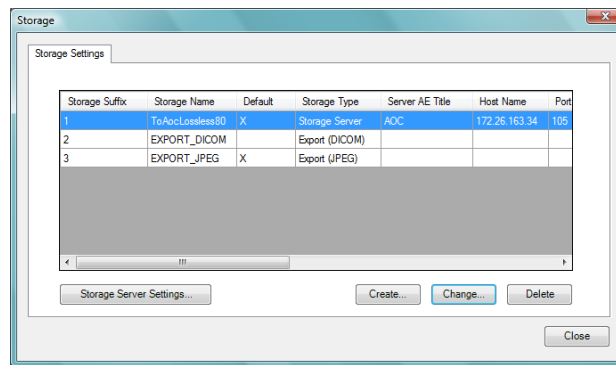
## 7.6 Storage

Storage Server, Export (DICOM), and Export (JPEG) can be selected as a storage.

Click the Storage icon to display the Storage screen.

The registered DICOM server storage locations and the export locations for DICOM files and JPEG files are displayed in a list, where entries can be added, edited, and deleted.

To exit the screen, click [Close].



Storage screen

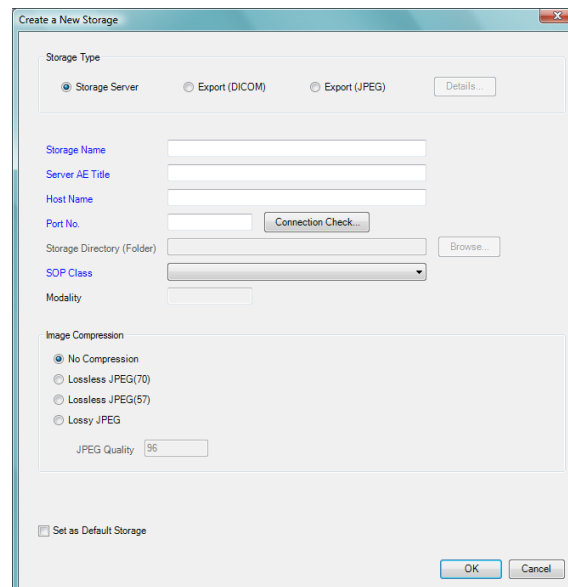
### 7.6.1 Registering the storages

Up to ten storages can be registered, but up to two storages only can be set as the default storages.

Also, up to two storages only can be set as the storages in a single transfer.

#### 1 Display the Create a New Storage screen.

Click [Create...].



Create a New Storage screen

**2** Select the Storage Type.

To output to a DICOM storage server, select **Storage Server**. To export a DICOM file, select **Export (DICOM)**. To export a JPEG file, select **Export (JPEG)**.

**3** Select the settings for the storage.

If **Storage Server** is selected under **Storage Type**, set the Storage Name, Server AE Title, Host Name, Port No., and SOP Class. If **Export (DICOM)** is selected, set the Storage Name, Storage Directory (Folder), and SOP Class. If **Export (JPEG)** is selected, set the Storage Name and Storage Directory (Folder).

Item	Function
Storage Name	Input the name using not more than 64 characters. It is case-sensitive.
Server AE Title	Input the title using not more than 16 alphanumeric characters and symbols. The backslash (\) cannot be input.
Host Name	Input the IP address or host name in 32 or less alphanumeric characters and symbols.
Port No.	The field accepts a number from 0 to 65535.
[Connection Check...]	Click this to check the connection with the storage server.
Storage Directory (Folder)	Click [Browse...] to open the Browse For Folder screen and set the folder where the file is stored.
SOP Class	Click ▼, and select the class from the list.
Modality	The modality which corresponds to the SOP Class is displayed.

**4** Set the Image Compression.

Select one of the methods.

When **Lossy JPEG** has been selected, input a number from 1 to 100 for the **JPEG Quality**.  
“100” represents the best image quality.

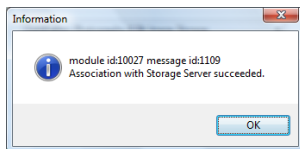
**Lossless JPEG**

The numeral following Lossless JPEG represents the UID of the transfer syntax.

Lossless JPEG (70): 1.2.840.10008.1.2.4.70

Lossless JPEG (57): 1.2.840.10008.1.2.4.57

- 5 Check the connection with the server. (When Storage Server has been selected)
- When Storage Server has been selected as the Storage Type, click [Connection Check...].  
The Information screen is displayed if the connection has been made properly.  
When [OK] is clicked, the Information screen is closed.



Information screen



**When the Warning screen is displayed**

Check the following points if the Warning screen is displayed.

- The network is functioning properly.
- The server is operating properly.

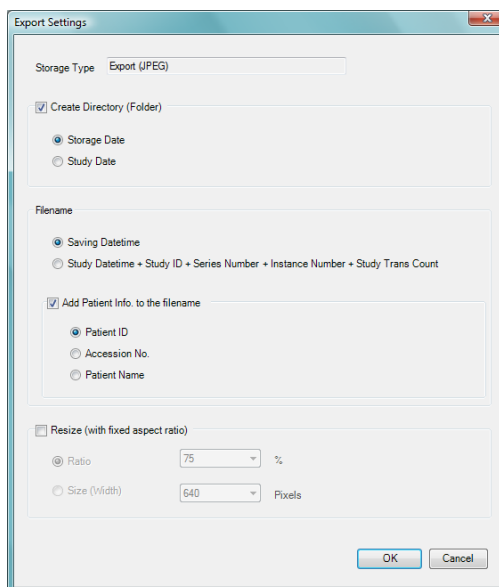
- 6 Set the storage to the default.
- To set as the default storage, check Set as Default Storage.  
However, because a maximum of two default storages can be set, it cannot be checked if two storages are already set.
- 7 Register the storages.
- Click [OK].

### 7.6.2 Advanced export settings (when Export is selected for the storages)

Click [Details...] on the Create a New Storage screen.

The Export Settings screen is displayed.

On this screen, the settings are made for creating directories for storing images, file names, and resizing. After the settings are complete, click [OK].



Export Settings screen

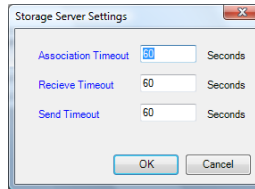
Item	Function
Create Directory (Folder)	Check this to set the storage folder name as the Storage Date or Study Date.
Filename	When [Saving Datetime] is checked: “yyyyMMddhhmmssfff.jpg(.dcm)” (Year, month, day, hour, minute, second, and millisecond when the file was stored.) When [Study Datetime + Study ID + ...] is checked: “yyyyMMddhhmmssEEEESSIIIitt.jpg(.dcm)” EEEE: Study ID SS: Series number III: Instance number itt: Study transfer count
Add Patient Info. to the filename	Patient information selected by the radio buttons (Patient ID, Accession No., Patient Name) are added to the start of the file name. The file name is changed to “Patient information” + “_” + “file name.” Only the file name is used when there is no selected patient information.
Resize (with fixed aspect ratio)	This can be set only when Export (JPEG) is selected. The image size can be modified with a fixed aspect ratio. [Ratio]: Click ▼ to specify the percentage that the width and height are reduced compared to the original image. [Size (Width)]: Click ▼ to select the width of the image after it is reduced in size.

### 7.6.3 Setting the storage server

Set the time-out period (second) for transferring to the registered storage server.

Click [Storage Server Settings...] on the Storage screen. The Storage Server Settings screen is displayed.

Set the items on the screen, and click [OK].



Item	Function
Association Timeout	Input a number from 1 to 600.
Receive Timeout	Input a number from 1 to 600.
Send Timeout	Input a number from 1 to 600.

### 7.6.4 Changing the registered information

To change the registered information, first click the storage on the list, and then click [Change...].

The Change a Storage screen is displayed so refer to 7.6.1 Registering the storages (see page 92), and change the registered information.

### 7.6.5 Deleting storages

To delete a storage, first click the storage on the list, and then click [Delete].

The warning screen is displayed, and the “Storage will be deleted from the list.” message is displayed. Click [OK] to delete the storage.

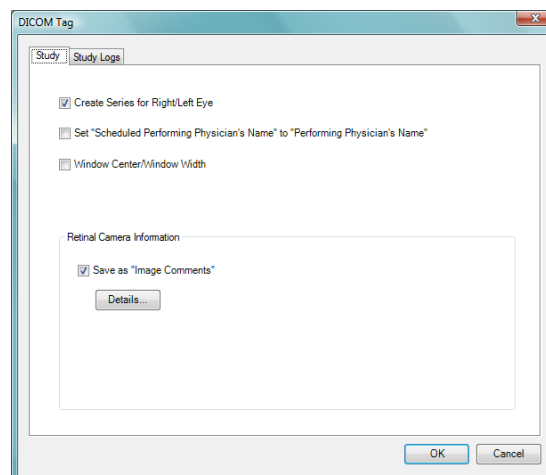


## 7.7 DICOM Tag

The DICOM Tag screen is displayed when the DICOM Tag icon is clicked.

Click the tabs, and set the parameters.

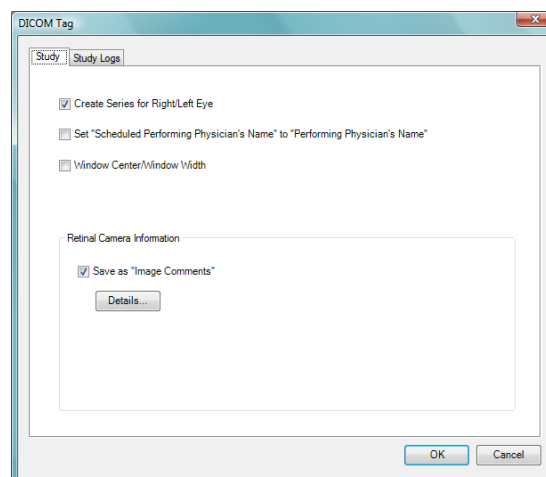
To save the settings and exit the DICOM Tag screen, click [OK].



DICOM Tag screen

### 7.7.1 Study tab

On this tab, the DICOM information which is to be saved on the images is set.



Study tab

Item	Operation
Create Series for Right/Left Eye	If this item is checked, a new series is created when the retinal camera mode has been changed or when the right and left eyes have been changed. If it is not checked, a new series will be created only when the retinal camera mode has been changed.

Continued on the following page >>

Item	Operation
Set "Scheduled Performing Physician's Name" to "Performing Physician's Name"	This setting takes effect only when the worklist has been acquired. If it is checked, the scheduled performing physician's name of the acquired worklist is saved as the performing physician's name of the DICOM information on the images. The performing physician's name is not saved when the scheduled performing physician's name is not present in the acquired worklist. If it is not checked, the User Name (see page 100) is saved as the performing physician's name. If the User Name has not been input, performing physician's name will not be saved.
Window Center/ Window Width	If this is checked, the window center and window width are saved as DICOM information on the images.
Save as "Image Comments"	Refer to 7.7.1.1 Setting image comments (see page 98). When the Save as "Image Comments" item is not checked, only what has been input for the Image Comments on the Image Property screen (see page 45) will be saved.
[Details...]	

7.7.1.1 Setting image comments

Take the steps below to set the information to be saved in the DICOM information (Image Comment) of the images. However, what has been set will not be displayed as the Image Comments (see page 45) of the Image Property.

- 1 Display the Image Comment Settings screen.  
Check the Save as "Image comments" item, and then click [Details...].

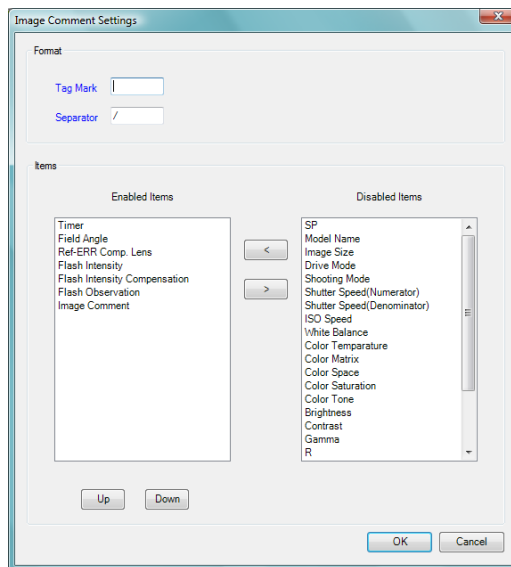


Image Comment Settings screen

- 2 Set the characters to be used as the Tag Mark and Separator.  
Input one character. For instance, if “.” is used for the Tag Mark and “/” as the Separator, they will be saved as follows.  
Example: Brightness:0/Contrast:0/Gamma:1.00

### 3 Select the Enabled Items.

To add or delete a display item, select the item, and then click  or .

### 4 Set the order in which the items are to be saved.

The items displayed as the **Enabled Items** will be saved in sequence from the top. To change the sequence in which the items are saved, select the item, and then click [Up] or [Down].

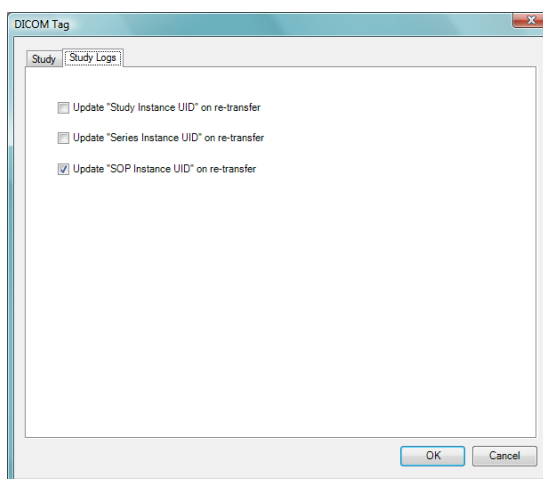
### 5 Save the settings and exit the screen.

Click [OK].

## 7.7.2 Study Logs tab

Select the settings for updating the UIDs if images are to be re-transferred when study logs or past studies are displayed.

However, these settings do not apply to studies whose transfer status (see page 31) is “untransferred.”



Study Logs tab

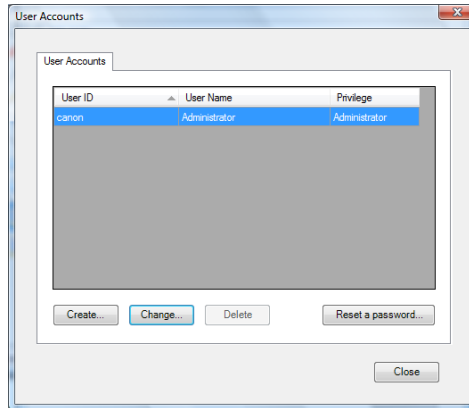
Item	Operation
Update “Study Instance UID” on re-transfer	If this is checked, the study instance UID is issued as follows. Model UID. study ID. transfer time (YYYYMMDDHHMMSS)
Update “Series Instance UID” on re-transfer	If this is checked, the series instance UID is issued as follows. Model UID. study ID. transfer time (YYYYMMDDHHMMSS). series number
Update “SOP Instance UID” on re-transfer	If this is checked, the SOP instance UID is issued as follows. Model UID. study ID. transfer time (YYYYMMDDHHMMSS). series number. instance number (image number)

Whichever item is selected, only the transfer time is updated.

Furthermore, it is the information of the images to be re-transferred that is updated and not the information of the images saved.

## 7.8 User Accounts

The User Accounts screen is displayed when the User Accounts icon is clicked.  
 Manage the information of the login user on this screen.  
 To save the settings and exit the User Accounts screen, click [Close].



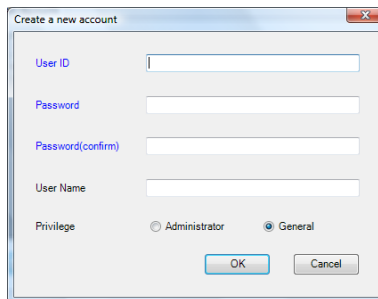
User Accounts screen

### 7.8.1 Registering users

Up to 20 users can be registered.

- 1 Display the Create a new account screen.

Click [Create...].



Create a new account screen

Item	Operation
User ID	Input no more than 16 characters for the user ID. No distinction is made between upper case and lower case for the letters input for the user ID. Blank spaces cannot be used.
Password	Input no more than 16 characters for the password.
Password(confirm)	Input no more than 16 characters for the password (confirm).
User Name	Input the name using not more than 63 characters. The equal sign (=) and backslash (\) cannot be input. Characters other than the preset specific character set (see page 76) cannot be input.
Privilege	Select Administrator or General.



### Concerning the user names

The user names are saved as DICOM information (Operator's Name) on the images. Depending on the settings (see page 97), a user name may also be saved as the Performed Physician's Name.

## 2 Register the users.

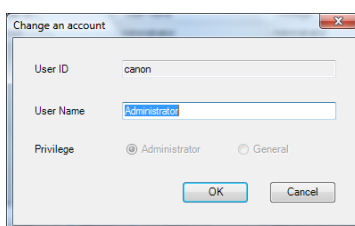
Click [OK]. The users are now registered on the user account list.

### 7.8.2 Changing the user information

The information of registered users can be changed.

Click a user on the user account list, and then click [Change...].

The Change an account screen is displayed. Change **User Name** and/or **Privilege**, and click [OK].



Change an account screen

### 7.8.3 Deleting the user information

The information of registered users can be deleted.

Click a user on the user account list, and then click [Delete].

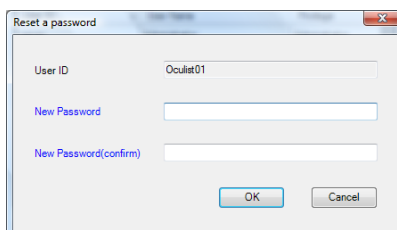
A Warning screen is displayed, "User will be deleted." message is displayed. Click [OK] to delete the user information.

### 7.8.4 Resetting the password

The passwords of registered users can be changed.

Click a user on the user account list, and then click [Reset a password...].

The Reset a password screen is displayed. Input the password both into **New Password** and **New Password(confirm)**, and click [OK].



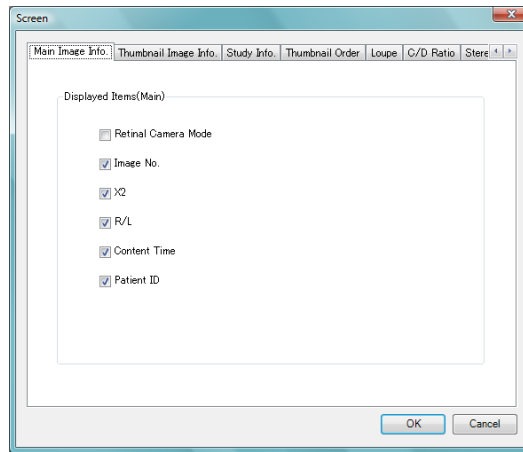
Reset a password screen

## 7.9 Screen

The Screen screen is displayed when the Screen icon is clicked.

Click the tabs, and set the parameters.

To save the settings and exit the Screen screen, click [OK].

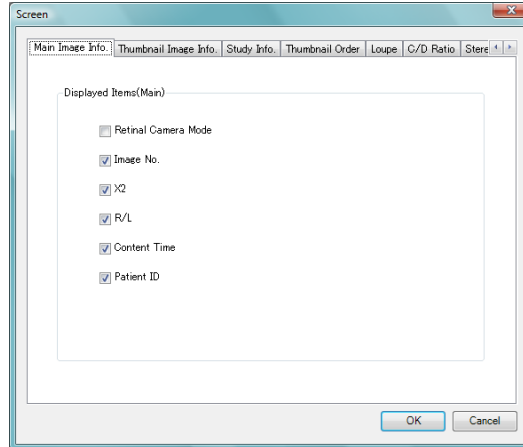


Screen screen

### 7.9.1 Main Image Info. tab

On this tab, the image information to be displayed on the main image is set when the main & thumbnail images are displayed (see page 44) on the screen.

Check the items to be displayed.

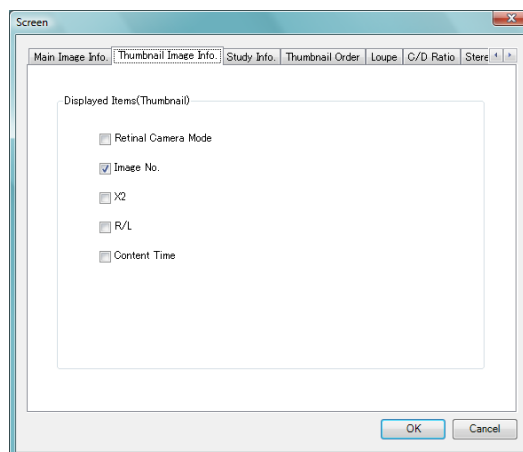


Main Image Info. tab

Displayed Items	Display Description
Retinal Camera Mode	Color is displayed.
Image No.	This item is indicated as the No. Image No. The images are displayed in the sequence in which they were taken.
X2	If the image is taken at x2, the magnification rate (x2) is displayed.
R/L	Either R (right eye) or L (left eye) is displayed.
Content Time	The photography time is indicated in hours:minutes:seconds.
Patient ID	This item is indicated as the ID: Patient ID.

### 7.9.2 Thumbnail Image Info. tab

On this tab, the image information to be displayed on the thumbnail images is set.  
Check the items to be displayed.

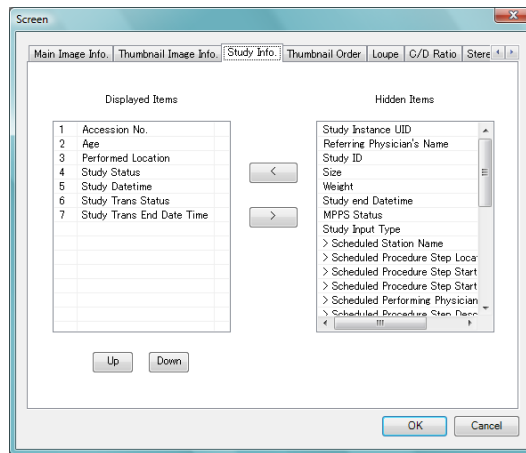


Thumbnail Image Info. tab

Displayed Items	Display Description
Retinal Camera Mode	Color is displayed.
Image No.	This item is indicated as the No. Image No. The images are displayed in the sequence in which they were taken.
X2	If the image is taken at x2, the magnification rate (x2) is displayed.
R/L	Either R (right eye) or L (left eye) is displayed.
Content Time	The photography time is indicated in hours:minutes:seconds.

### 7.9.3 Study Info. tab

On this tab, study information to be displayed at the right of the main screen is set.



Study Info. tab

The items displayed in **Displayed Items** appear in the study information at the right of the main screen.

To add or delete a display item, select the item, and then click  or .

To change the display sequence, select the item, and then click **[Up]** or **[Down]**.

For the display items listed below, there are times when no information can be input or when the display items themselves are subject to certain conditions.

Displayed Items	Display Description
Age	When a worklist is used, the values obtained by calculation from the Patient Birth Date (0010,0030) in the acquired worklist are used. If, however, there is no value for the Patient Birth Date, the value for Patient's Age (0010,1010) in the worklist is used. When the study has been input manually, the value obtained by calculation from the birth date is used.
Study Status	NONE, REGISTER, START, CANCEL or FINISH is displayed.
MPPS Status	NONE, IN_PROGRESS, DISCONTINUED or COMPLETED is displayed.
Study Input Type	UNKNOWN, MANUAL, WORKLIST, SERIAL_READER or STUDIX is displayed.
Study Trans Status	NONE, START, FINISH, ERROR or FATAL_ERROR is displayed.

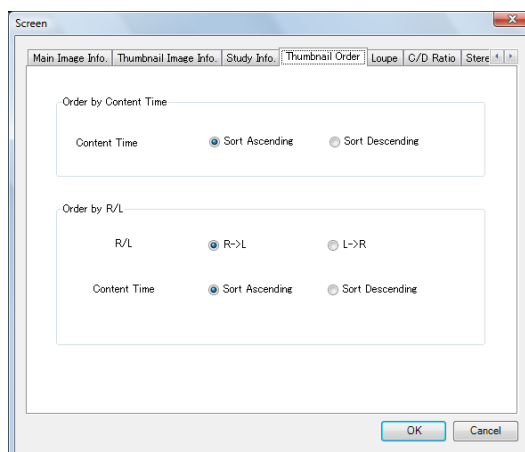


### 7.9.4 Thumbnail Order tab

On this tab, the thumbnail display sequence to be used when the Thumbnails icon was clicked on the main screen is set.

When the By Time icon is clicked, the Order by Content Time is applied; when the By Retinal Camera Mode icon is clicked, the Order by Retinal Camera Mode is applied.

The Order by Retinal Camera Mode is applied in the order of Retinal Camera Mode, R/L, and Content Time.

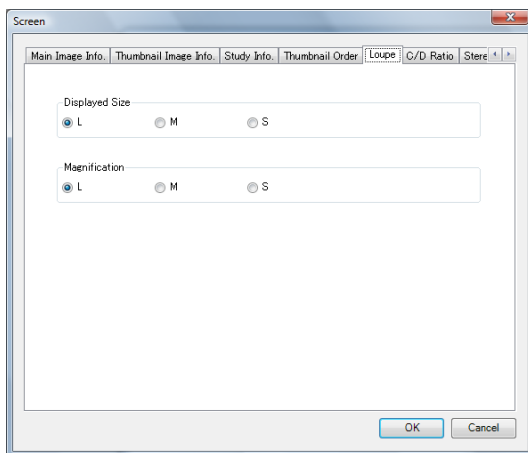


Thumbnail Order tab

Setting Item		Display description
Order by Content Time		
Content Time	Sort Ascending	The thumbnails are displayed in the sequence of their photography times starting with the oldest.
	Sort Descending	The thumbnails are displayed in the sequence of their photography times starting with the most recent.
Order by R/L		
R/L	R -> L	The thumbnails are displayed for the right eye followed by the left eye.
	L -> R	The thumbnails are displayed for the left eye followed by the right eye.
Content Time	Sort Ascending	The thumbnails are displayed in the sequence of their photography times starting with the oldest.
	Sort Descending	The thumbnails are displayed in the sequence of their photography times starting with the most recent.

### 7.9.5 Loupe tab

On this tab, the display size and magnification rate for the Loupe function of the main image is set.

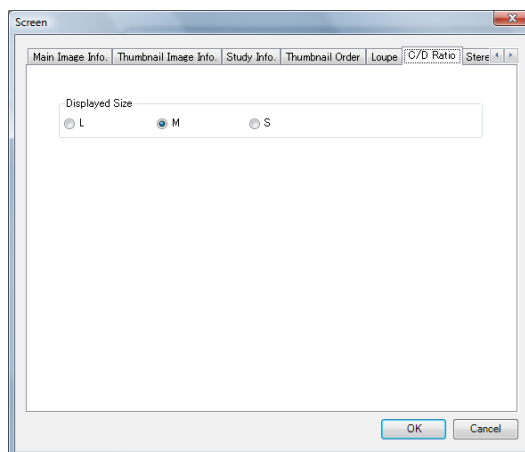


Loupe tab

Item	Status	Function
Displayed Size	L	The image is displayed in a square with a side equal to 1/3 the vertical length of the main screen.
	M	The image is displayed in a square with a side equal to 1/4 the vertical length of the main screen.
	S	The image is displayed in a square with a side equal to 1/5 the vertical length of the main screen.
Magnification	L	The image is displayed at 3.0x size of the main image.
	M	The image is displayed at 2.0x size of the main image.
	S	The image is displayed at 1.4x size of the main image.

### 7.9.6 C/D Ratio tab

On this tab, the magnification rate in the C/D Ratio screen is set. The rate is used to magnify the image when it is clicked.

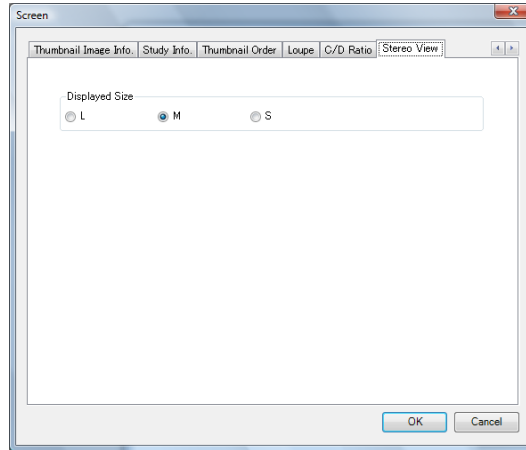


C/D Ratio tab

Item	Status	Function
Displayed Size	L	Select this option to enlarge the M display size by 1.4x (based on the height of the image).
	M	Normal size
	S	Select this option to reduce the M display size by 1/2x (based on the height of the image).

### 7.9.7 Stereo View tab

On this tab, the magnification rate in the Stereo View screen is set. The rate is used to magnify the image when it is clicked.



Stereo View tab

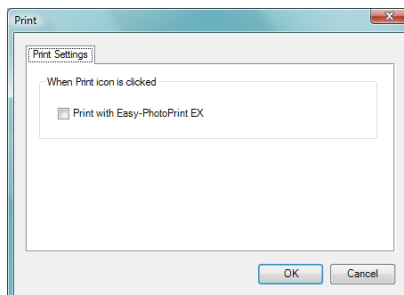
Item	Status	Function
Displayed Size	L	Select this option to enlarge the M display size by 1.4x (based on the height of the image).
	M	Normal size
	S	Select this option to reduce the M display size by 1/2x (based on the height of the image).

## 7.10 Print

The Print screen is displayed when the Print icon is clicked.

This sets the print operation that is executed when clicking the Print icon in the main screen.

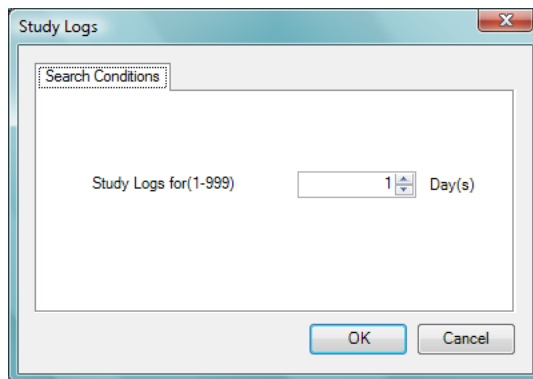
To save the settings and exit the Print screen, click [OK].



- 1** Set the print operation for the Print icon.  
To print using Easy-PhotoPrint EX, add a check mark to the Print with Easy-PhotoPrint EX option.  
To print using the simple printing function of the control software, remove the check mark.
- 2** Save the settings and exit the Print screen.  
Click [OK].

### 7.11 Study Logs

The Study Logs screen is displayed when the Study Logs List icon is clicked.  
Set the number of days being studied for display on the Study Log.  
To save the settings and exit the Study Logs screen, click [OK].



Study Logs screen

Click ▲ or ▼ for Study Logs for (1-999), and set the number of days.

### 7.12 Magnetic Card/Bar Code

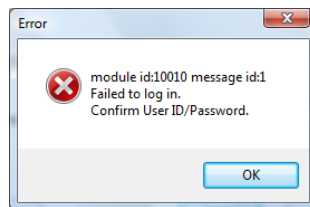
Clicking the Magnetic Card/Bar Code icon opens the Magnetic Card/Bar Code Setting screen.  
At this screen, the serial/USB communication settings for the magnetic card/barcode reader that is used and the settings for the magnetic card/barcode data are made.  
For details, please contact a Canon representative or distributor.

## 8. Before calling the service technician

---




### 8.1 Appearance of the message screen

A message screen appears when trouble has occurred or when there is information for the user.



Message screen (Error)

There are three message screens, each of which is identified by an icon.

Icon	Name	Reference section
	Error	8.2 Error (see page 112)
	Warning	8.3 Warning (see page 116)
	Information	8.4 Information (see page 125)

Please refer to the message information in the table using the icons, module ids, and message ids.

If any messages not shown in the table are displayed, or if the problem cannot be resolved by the remedies listed in the table, please contact your Canon representative or distributor where you purchased this product.

## 8.2 Error

module id	message id	Message	Detail
00005	5	Specified User ID already exists.	The User ID which has been input is already registered. Change the User ID.
00008	8	Failed in DICOM communications. - a series of operation with SCP	Check the MPPS tab (see page 91), Worklist tab (see page 88) or storage settings (see page 92).
	10	Failed in DICOM communications. - C-STORE-RQ	Check the storage settings (see page 92).
	11	Failed in DICOM communications. - C-STORE-RSP	
	12	Failed in DICOM communications. - C-ECHO-RQ	Check the MPPS tab (see page 91), Worklist tab (see page 88) or storage settings (see page 92).
	13	Failed in DICOM communications. - C-ECHO-RSP	
	14	Failed in DICOM communications. - N-CREATE-RQ	Check the MPPS tab (see page 91).
	15	Failed in DICOM communications. - N-CREATE-RSP	
	16	Failed in DICOM communications. - N-SET-RQ	
	17	Failed in DICOM communications. - N-SET-RSP	Check the Worklist tab (see page 88).
	18	Failed in DICOM communications. - C-FIND-RQ	
	19	Failed in DICOM communications. - C-FIND-RSP	
	20	Failed in DICOM communications. C-FIND returned error status.	
	21	Failed in DICOM communications. - C-CANCEL-RQ	
00011	1	Fail to open Omron Device.	<ul style="list-style-type: none"> <li>• Check that the OMRON device is connected correctly.</li> <li>• Check that the device number is assigned correctly.</li> <li>• Check that the driver is installed correctly.</li> </ul>
	2	Fail to close Omron Device.	
10002	101	Failed to connect to specified EOS.	Check the connection with the EOS digital camera.
10003	2	Incorrect Entry of Date for Search Conditions	Open the Search Screen (see page 32) from the Study Logs screen, and then input the correct date.
10004	29	Insufficient Free Space in Storage Directory No image can be captured. [** GB]	No images can be taken since the free space on the drive containing the storage directory is less than 1 GB. Increase the amount of free space on the drive.
	3701	Service cannot start. Service name: MSDTC Display name: Distributed Transaction Coordinator	Set the startup type of the service to a setting other than "Disable."
	4100	Error on Saving to External Storage	Check that the specified saving destination can surely save the study(ies).
	4103	Failed to read the external study.	Try to display the study log file again. If this fails, the data may be corrupted. If the data is retained in the Temporarily Saved, try saving again.
	4106	A folder or file without access rights exists under the specified folder.	Select a folder again in the Browse For Folder screen. Select the study logs file folder or a folder at the nearest possible level.
	4107	The path of the specified folder exceeds the maximum length.	Move the folder of the study logs file to a location where the folder path is 150 characters or less. Click [Folder], and specify the new folder location in the Browse For Folder screen.



module id	message id	Message	Detail
10005	1001	Failed to open a port.	<ul style="list-style-type: none"> <li>Refer to 7.3.1 Retinal Camera Settings (see page 77), and check the port number setting.</li> <li>Disconnect the retinal camera communication cable, then connect the cable again.</li> </ul>
	1003	Failed to set a port.	Refer to 7.3.1 Retinal Camera Settings (see page 77), and check the port number setting.
	1007	Power for the retinal camera is turned off or the cable is improperly connected.	Check that the computer and retinal camera are connected correctly.
	1501	Error occurred during communications with the retinal camera. Failed to resend the command frame.	Turn the retinal camera's power off and back on.
	1502	Error occurred during communications with the retinal camera. Failed to resend the reply frame.	
	1503	Error occurred during communications with the retinal camera. Time-out for No Response	
	1504	Error occurred during communications with the retinal camera. Time-out for Incomplete Transmission	
	1603	Cameras are not attached to the main mount and sub-mount of the retinal camera.	Check that the digital camera is connected correctly.
1701	Connected retinal camera model is different from the model setting in this software.	Check the model of the retinal camera.	
10007	4	JPEG File Saving Error	Check how much free memory is left on the drive where the data is to be saved.
10010	1	Failed to log in. Confirm User ID/Password.	Input the User ID and Password registered in the user account (see page 100), and log in.
	2	It cannot be set without administrator's privileges.	Log in using the User ID for which the Privilege has been set to the Administrator (see page 100).
10011	2	This application is already running.	Use the software application which is running.
	101	Set the screen resolution to 1024 × 768 or more.	Set the Windows screen resolution to 1024 × 768 or more.
	102	Set the screen color to 24 bits or more.	Set the Windows color quality to 24 bit or more.
	110	Operation can be executed by a Windows user with Administrator privileges.	Log into Windows using the name of the user belonging to the Administrators group.
	114	Essential data has not been set up. Set up essential data.	Input the required items.
10012	27	Free space in the drive is not sufficient to capture images. Make up space in the drive by deleting studies in Study Logs List. [Drive:XX freesize: XXGByte(XXbyte)] [Drive: XX]	Delete studies in the study log screen (see page 38) to increase the amount of available space in the image storage drive.
	29	Image cannot be captured due to insufficient space to store captured image. Make up space in the drive by deleting studies in Study Logs List. [Drive:XX freesize: XXGByte(XXbyte)]	
	30	Number of captured images exceeds the maximum for the study. No more image can be captured for the study.	End the study, and start a new study.
10019	7	MPPS Communication Error	Check that the MPPS server is operating properly. Check the MPPS tab (see page 91) settings.
	11	Study cannot be executed since a study having the same Study Instance UID is running.	Check the study information which was transmitted from the server.

Continued on the following page &gt;&gt;

## 8. Before calling the service technician (Error)

module id	message id	Message	Detail
10024	311	No main image is selected.	Select an image.
	10308	No image is selected.	Select the target image.
10031	3	No Manual or Mag/Barcode Input module is set. At least one is required.	Select the Manual Input Module tab (see page 83) or the Mag Barcode Input Module tab (see page 86).
10040	104	No Storage Directory	Check the name of the storage folder.
	105	Failed to create a folder.	Check the access permissions for the storage folder.
	106	The same file name exists in the storage directory.	Either change the name of the storage file, or delete the file with the same name.
	107	Error occurred when the file was moved to the storage directory.	Check the access permissions for the storage file.
10045	5	Failed to search worklist. It may be caused by communication failure with the worklist server.	Check that the worklist server is operating properly.
	25	Failed to initialize the magnetic card/bar code device.	Check the magnetic card/barcode reader connection. The magnetic card/barcode reader settings need to be made.
10048	41	Failed to initialize the magnetic card/bar code device.	Please contact a Canon representative or distributor.
10049	11	Failed to register Patient Info. in the database.	The study progress status could not be saved to the study file. Check if the study file (ccrhis.his) is set to read-only.
	49	Failed to initialize the magnetic card/bar code device.	Check the magnetic card/barcode reader connection. The magnetic card/barcode reader settings need to be made. Please contact a Canon representative or distributor.
	50	The studies were not read. Number of studies exceeded the maximum to read.	Please reduce the number of studies in the study file (ccrhis.his) to the number of displayable studies.
10052	100	No printer is installed.	Install the printer from the Printers and Faxes screen in the Control Panel.
	200	No main image is selected.	Select the printing image.
	201	Image Read Error Only print info. is output since image reading has failed.	The printing information and the text "NO IMAGE" are printed for images where a reading error has occurred.
	300	Print Error Printing is cancelled.	Check the printer server and network cable connections.
	301	Print Error Printing is cancelled.	
10053	8	Failed to communicate with the magnetic card/bar code reader. Check the cable. Check the settings.	Check the magnetic card/barcode reader connection. The magnetic card/barcode reader settings need to be made. Please contact a Canon representative or distributor.
10056	204	No Storage Directory	Refer to 7.6 Storage (see page 92), click [Edit] in the storage setting screen, and check the storage directory.
	205	The same file name exists in the storage directory.	Either delete the file with the same file name at the storage directory, or change the storage.
	206	Failed to save JPEG File.	Refer to (2) in 2.1 Software (see page 3), and set the proper access privileges for the storage folder.
	207	Failed to create a folder.	Refer to (2) in 2.1 Software (see page 3), and set the proper access privileges for the storage folder.
10063	1	JPEG File Saving Error [Error description]	Refer to the error description, and check the file into which the data is to be saved.

---

module id	message id	Message	Detail
10067	6	Specified folder does not exist or is not accessible.	Specify the folder again.
	7	No right to read contents in the folder.	Refer to (2) in 2.1 Software (see page 3), and set the proper access privileges for the storage folder.
	9	Not Recognized as a directory.	Specify the folder again.
	10	No right to write contents in the folder.	Refer to (2) in 2.1 Software (see page 3), and set the proper access privileges for the storage folder.

## 8.3 Warning

module id	message id	Message	Detail
10001	1002	Invalid image was captured. Failed to acquire Retinal Camera Info. within the specified time. No Validity for Current Study	<ul style="list-style-type: none"> <li>Do not press the shutter button of the digital camera.</li> <li>Check that the computer and digital camera are connected correctly.</li> <li>Turn the equipment's power off and back on, and take a test image.</li> </ul>
	1009	Photography frequency exceeded the limit. Please wait.	Images cannot be saved since images were taken continuously over a short period of time. Wait for a few moments, and then take the images.
10002	1000	Failed to connect to EOS. Check the cable. Check the power supply.	Check that the computer and digital camera are connected correctly. Check that the digital camera is turned on.
	1001	Failed to control EOS digital camera. Follow the instructions as follows:  1. Turn off LCD monitor on the back if it's on. 2. Close the setting menu if it's displayed. 3. Turn the retinal camera to the eye front image mode if it's in retinal image mode. 4. Release Shutter Release button of the retinal camera if it's held down.  When all the items above are cleared, press Retry button.	Perform operation based on the message details.
	1004	Auto power off option is enabled on EOS. Select Off for Auto power off.	Refer to the operating instructions of the digital camera, and set the digital camera.
	1005	Communications with EOS was disconnected.	Check that the computer and digital camera are connected correctly. Check that the digital camera is turned on.
	1006	EOS battery is almost empty. Supply power with AC adapter.	Supply the power of the digital camera using the AC adapter.
	1007	EOS setting has been changed. Reset the setting?	To return to the original setting, click [YES]; otherwise, click [NO].
10003	1	Selected study will be deleted.	To delete a study, click [OK]; to cancel the deletion, click [Cancel].
	3	No Storage Selected	Select the storage, and then transfer the image.
	4	Character '\' cannot be used for Patient ID.	Delete the backslash (\).
	7	Character '\' or '=' cannot be used for Patient Name.	Delete the backslash (\) or equal sign (=).
	8	Only alphanumeric characters can be used for Patient Name.	Delete the characters which are not single-byte alphanumerics or symbols.
	203	The study being transferred is selected. Failed to transfer.	No operations can be performed for studies being transferred so wait until the transfer is completed.
	204	The study being transferred is selected. Failed to delete the study.	
	11004	Study Logs screen cannot display all logs. Number of study logs to be displayed exceeds the maximum. Change the search conditions.	Change the search conditions (see page 32).

## 8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10004	25	Required fields must be entered. [item]	Input the required items. The titles of the required items are indicated in blue.
	26	The path for storage directory exceeds the maximum length. [Max. *** bytes]	Select a folder where the path for the Image Storage Directory (Folder) (see page 80) is fewer than 150 bytes.
	27	Storage directory does not exist.	Check that the storage directory (see page 80) which has been set actually exists.
	28	Drive specified for storage directory (folder) is not a fixed disk.	Set the storage directory (see page 80) on the fixed disk.
	30	Insufficient Free Space in Storage Directory [** GB]	Increase the amount of free memory on the fixed disk on which the storage directory has been set (see page 80).
	43	Character ' ' cannot be used.	Do not input spaces for the tags and separators of the Image Comment Settings screen (see page 98).
	4105	Failed to read the external study.	Upgrade the version of the Retinal imaging control software NM (CR-1 Mark II) to the same version as that you used to save the file, or to a newer version.
10005	103	Over Discharge Do not operate the retinal camera for a while.	Wait for a few moments, and then take the images.
	104	EOS Digital camera is not mounted. Mount the camera or select Sub Camera mode.	Mount the digital camera on the retinal camera.
	107	Communication Port Error	<ul style="list-style-type: none"> <li>• Turn the retinal camera's power off and back on.</li> <li>• Turn the computer's power off and back on.</li> </ul>
	108	Communication Protocol Error	
	109	Photography frequency exceeded the limit. Please wait.	Images cannot be saved since images were taken continuously over a short period of time. Wait for a few moments, and then take the images.
	201	Mirror Drive Error in EOS Camera Mode	Turn the equipment's power off and back on, and take a test image.
	202	X-contact Error in EOS Camera Mode	
	204	Retinal camera was operated in Idle mode.	Do not press the shutter release button of the retinal camera while the photography ready lamp is not lighted up green.
	205	Flash Not Fired	Turn the equipment's power off and back on, and take a test image.
	206	X-contact Error in EOS Camera Mode	
10006	1000	Default QA parameters by mode will be changed.	To return the current settings to the default values, click [OK] on the QA (Quality Assurance) screen (see page 65).
	1001	Selected QA parameter set will be deleted.	To delete the current QA parameter set to the default value, click [OK] on the QA (Quality Assurance) screen (see page 65).
	1002	Current QA parameter values will be applied to all the selected images.	To apply the current settings to all the selected images, click [OK] on the QA (Quality Assurance) screen (see page 65).
	1003	Selected QA parameter set will be updated.	To overwrite the QA parameter set with the current settings, click [OK] on the QA (Quality Assurance) screen (see page 65).
10009	1000	Invalid Image Comments A character/characters for Image Comments is/are not supported by Specific Character Set.	Delete any control characters.
	1001	Invalid Image Comments A character/characters for Image Comments is/are not supported by Specific Character Set.	Input using the specific character set.
10010	8	A character/characters for User Name is/are not supported by Specific Character Set. Change the user name.	Input the user name using the specific character set.

Continued on the following page &gt;&gt;

8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10011	104	Enter User ID/Password.	When logging in, input the user ID and password.
	105	Enter in alphanumeric.	Input the user ID/password in single-byte alphanumeric characters.
	109	Application will be closed. Press Cancel button and log in to the application to view the details of the transfer error.	To check the details of the transfer error, click [Cancel], and then log in.
10012	28	Image can be captured but the storage space for captured images runs short. Make up space in the drive by deleting studies in Study Logs List.	Delete studies in the study log screen to increase the amount of available space in the drive.
10013	50	Images stored for more than the specified periods will be deleted.	To delete the image, click [OK].
	66	All the studies will be closed and the current user will be logged off.	To log off, click [OK].
	85	Application cannot be terminated during transfer.	Close all studies after transfer, then exit the software.
	86	All the studies will be closed and then the application will be.	To end the study and exit the software, click [OK].
10019	10	A study with same Accession No. or Patient ID is now in progress. Do you want to create a new study ?	To start as a new study, click [YES].
	12	A study with same Accession No. or Patient ID is now in progress. Do you want to update ?	To update the study information, click [YES].
10020	1000	No Storage Selected Image(s) will not be transferred.	Select the storage, and then transfer the image.
	1001	Transfer for this study is in progress. You can't transfer it before the transfer is completed.	Wait until the transfer is completed before performing the transfer.
10023	1	Invalid Values for Birth Date	Input the correct birth date.
	5	Patient Info. set as any of essential data items are not entered.	Input the required item that is displayed.
	6	The length of either of 5 Patient Name fields is too long. Shorten the length to 60 characters or less.	Shorten the length to 60 characters or less.
	12	Invalid character was entered to the field.	Re-input the data based on the information displayed in [Details].
	14	Line feed code cannot be entered to Study Description field.	Delete the line feed code.
	15	Too Long Patient Name. Shorten the total length of the 5 items to 60 characters or less.	Input the Patient name in 60 characters or less for all five items total.
	16	Length of Accession No. exceeds the limit.	Input within the limited length.
	17	A character/characters for Accession No. is/are not supported by Acceptable Character Set or Specific Character Set.	Input using the designated input character type or specific character set.
	18	Length of Patient ID exceeds the limit.	Input within the limited length.
	19	A character/characters for Patient ID is/are not supported by Acceptable Character Set or Specific Character Set.	Input using the designated input character type or specific character set.
	21	A character/characters for Study Description is/are not supported by Acceptable Character Set or Specific Character Set.	Input using the designated input character type or specific character set.
22	Character '\ or control character cannot be used for Accession No.	Delete the backslash (\) and any control characters.	
23	Character '\ or control character cannot be used for Patient ID.		

8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10023	24	Character '\', line feed, or control character cannot be used for Study Description.	Delete the backslash (\), line feed code, and any control characters.
	29	Character '\', '=', '' or control code cannot be used for Last Name.	
	30	Multi-byte character cannot be used for Last Name.	Delete the multi byte characters.
	31	Character '\', '=', '' or control code cannot be used for First Name.	Delete the backslash (\), line feed code, and any control characters.
	32	Multi-byte character cannot be used for First Name.	Delete the multi byte characters.
	33	Character '\', '=', '' or control code cannot be used for Middle Name.	Delete the backslash (\), line feed code, and any control characters.
	34	Multi-byte character cannot be used for Middle Name.	Delete the multi byte characters.
	35	Character '\', '=', '' or control code cannot be used for Prefix.	Delete the backslash (\), line feed code, and any control characters.
	36	Multi-byte character cannot be used for Prefix.	Delete the multi byte characters.
	37	Character '\', '=', '' or control code cannot be used for Suffix.	Delete the backslash (\), line feed code, and any control characters.
	38	Multi-byte character cannot be used for Suffix.	Delete the multi byte characters.
	39	Out-of-Range Birth Date (A date earlier than 1869 or later than tomorrow is entered.)	Input the correct birth date.
	40	Entered date is invalid for Birth Date.	
	41	A character/characters for Patient ID is/are not supported by Specific Character Set.	Input using the specific character set.
	42	A character/characters for Accession No. is/are not supported by Specific Character Set.	
	43	A character/characters for Last Name is/are not supported by Specific Character Set.	
	44	A character/characters for First Name is/are not supported by Specific Character Set.	
	45	A character/characters for Middle Name is/are not supported by Specific Character Set.	
	46	A character/characters for Prefix is/are not supported by Specific Character Set.	
	47	A character/characters for Suffix is/are not supported by Specific Character Set.	
	48	A character/characters for Study Description is/are not supported by Specific Character Set.	
	55	A character/characters for Last Name is/are not supported by Acceptable Character Set.	
	56	A character/characters for First Name is/are not supported by Acceptable Character Set.	
	57	A character/characters for Middle Name is/are not supported by Acceptable Character Set.	
	58	A character/characters for Prefix is/are not supported by Acceptable Character Set.	
	59	A character/characters for Suffix is/are not supported by Acceptable Character Set.	
	60	All the items are disabled to input.	Check the input-prohibited items.
	61	There is no header string set up in Input Format. Do you want to start study?	Check the header character string that was set in Input Format (see page 84).

Continued on the following page >>

8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10024	4	Character '\ or line feed code cannot be used for Study Description.	Delete the backslash (\) or line feed code.
	11004	A character/characters for Study Description is/are not supported by Specific Character Set.	Input using the specific character set.
	11005	One or more studies are in progress.	End the study.
	12001	Number of selected images is not two.	Select two images.
10026	102	Enter essential data. [item]	Input the required items.
	103	Enter in alphanumeric except '\. [item]	Delete the backslash (\).
	104	Character '\ cannot be used. [item]	
	105	A character/characters is/are not supported by the specified character set.	Input using the specific character set.
10027	1001	No default is registered.	When a storage has been registered, check “Set as Default Storage” for one of the storages.
	1101	Length for a storage path exceeds the maximum. [Max. ***]	Select a folder where the number of characters for the Image Storage Directory (Folder) (see page 80) is fewer than 150 characters.
	1102	Enter essential data. [item]	Input the required items.
	1103	Enter in alphanumeric. [item]	Use alphanumerics for the input.
	1104	Enter in numeric. [item]	Use numerics for the input.
	1105	Duplicated Storage Name	Change the Storage Name.
	1106	Entered value exceeds the limit. [item (** - **)]	Set to a value which does not exceed the input limit.
	1107	Entered value could not be checked.	Use alphanumerics for the input.
	1110	Association with Storage Server was rejected. Check the settings and status of Storage Server.	<ul style="list-style-type: none"> <li>Check that the storage server is operating properly.</li> <li>Check the settings on the Create a New Storage screen (see page 92).</li> </ul>
	1111	Enter in alphanumeric except '\.	Delete the backslash (\).
	1401	Storage will be deleted from the list.	To delete the storage, click [OK].
	2001	Number of selected storages exceeds the maximum.	Up to two storages can be checked for “Set as Default Storage.”
10028	104	User will be deleted.	To delete the user, click [OK].
	202	No Essential Data	Input the required items.
	203	Enter in alphanumeric.	Use single-byte alphanumerics for the input.
	204	Character '\, '=' or control code cannot be used. [item]	Delete the backslash (\), equal sign (=) or control code.
	205	Wrong Confirmation Password. Enter the password again.	Input the same characters as for Password into Password(confirm).
	207	A character/characters is/are not supported by the specified character set.	Input using the specific character set.
	302	Character '\, '=' or control code cannot be used. [item]	Delete the backslash (\), equal sign (=) or control code.
	305	A character/characters is/are not supported by the specified character set.	Input using the specific character set.
	402	No Essential Data [item]	Input the required items.
	403	Enter in alphanumeric. [item]	Use alphanumerics for the input.



## 8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10028	404	Wrong Confirmation Password. Enter again.	Input the same characters as for Password into Password(confirm).
	502	No Essential Data [item]	Input the required items.
	503	Enter in alphanumeric. [item]	Use alphanumerics for the input.
	504	Wrong Old Password. Enter the password again.	Input the registered password.
	505	Wrong Confirmation Password. Enter the password again.	Input the same characters for New Password and New Password(confirm).
	508	New password is the same as the old password. Enter again.	Do not input the Current Password as the New Password.
10031	11	Invalid Module File Combination. To use the MPPS module, enable the worklist module.	When the MPPS tab (see page 91) has been set, set the Worklist tab (see page 88) as well.
10033	201	Print Adjustment parameters will be updated.	To update the parameters, click [OK].
10044	9	Association with MPPS Server was rejected. Check the settings and status of MPPS Server.	<ul style="list-style-type: none"> <li>Check that the MPPS server is operating properly.</li> <li>Check the MPPS tab (see page 91) settings.</li> </ul>
	10	Invalid Server AE Title Check that valid characters are entered for AE Title.	Check the MPPS tab (see page 91) settings.
	11	Invalid Server Host Name Check that valid characters are entered for Host Name.	
	12	Invalid Port Number Check that a numeric within the range between 0 and 65535 is entered.	
10045	7	Association with Worklist Server was rejected. Check the settings and status of Worklist Server.	<ul style="list-style-type: none"> <li>Check that the worklist server is operating properly.</li> <li>Check the Worklist tab (see page 88) settings.</li> </ul>
	8	Specified value for Time is out of range. Enter a value between 1 and 24.	Refer to 7.5.5.3 Setting the search conditions (see page 89).
	9	Specified Range of Date are out of range. XXXXX - XXXXX	
	10	Specified Range of Days are out of range. Enter values between 0 and 999.	
	11	Invalid Worklist Search Interval. Check that a numeric within the range between 0 and 60 is entered.	
	12	Invalid Server AE Title Check that valid characters are entered for AE Title.	
	13	Invalid Server Host Name Check that valid characters are entered for Host Name.	Refer to 7.5.5.2 Performing the Worklist Server Settings (see page 88).
	14	Invalid Port Number Check that a numeric within the range between 0 and 65535 is entered.	
	16	Invalid Search Condition Value(s) Selected item has an invalid character or the length is too long. [XXXX] (DICOM TAG Name+DICOM TAG Number)	Refer to 7.5.5.3 Setting the search conditions (see page 89).
	18	The same DICOM tag is already set up for Search Conditions. [XXXX] (DICOM TAG Number+DICOM TAG Name)	It is not possible to register a multiple number of the same DICOM tag.

Continued on the following page &gt;&gt;

8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10045	19	Specified End Date is earlier than Start Date.	Input a date later than the Start Date as the End Date.
	20	Length of acquired worklist item is too long. The following tag number item(s) are cut off. [XXXX] (DICOM TAG Number+DICOM TAG Name)	The transfer data of the worklist server does not meet the DICOM standards. Check the worklist server settings.
	21	Acquired worklist item format is invalid. The following tag number item(s) are not acquired. [XXXX] (DICOM TAG Number+DICOM TAG Name)	
10048	1	Invalid Values for Birth Date	Input the correct birth date.
	5	Patient Info. set as any of essential data items are not entered.	Input the patient information that was set in the essential data (see page 83).
	6	The length of either of 5 Patient Name fields is too long. Shorten the length to 60 characters or less.	Shorten the length to 60 characters or less.
	12	Invalid character was entered to the field.	Check the details of the displayed item, and enter it again.
	14	Line feed code cannot be entered to Study Description field.	Delete the line feed code.
	22	Character '\ ' or control character cannot be used for Accession No.	Delete the backslash (\) and any control characters.
	23	Character '\ ' or control character cannot be used for Patient ID.	
	24	Character '\, ' line feed code, or control character cannot be used for Study Description.	Delete the backslash (\), line feed code and any control characters.
	29	Character '\, ' or control code cannot be used for Patient Name.	Delete the backslash (\) and any control characters.
	30	Multi-byte character cannot be used for Patient Name.	Delete the multi byte characters.
	39	Out-of-Range Birth Date (A date earlier than 1869 or later than tomorrow is entered.)	Input the correct birth date.
	40	Entered date is invalid for Birth Date.	
	42	A character/characters for Patient ID is/are not supported by Specific Character Set.	Input using the specific character set.
	43	A character/characters for Accession No. is/are not supported by Specific Character Set.	
	44	A character/characters for Patient Name is/are not supported by Specific Character Set.	
	45	A character/characters for Study Description is/are not supported by Specific Character Set.	
	46	A character/characters for the field is/are not supported by Specific Character Set.	
	47	A character/characters for the field is/are not supported by Specific Character Set.	
	48	A character/characters for the field is/are not supported by Specific Character Set.	
	49	Entered characters are not acceptable because they do not match Specific Character Set.	Delete the single-byte Japanese kana characters.
50	Length of the acquired item is too long. The following item(s) is/are cut off.	Check the information input in the magnetic card or barcode.	

## 8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10049	7	Entered Model No. is not numeric or the value is out of the range between 1 and 99.	Set the model number to a number from 1 to 99.
	8	Length for storage path for the study file is too long. Shorten to less than 80 bytes.	Set the length of the storage path to less than 80 bytes.
	22	Character '\ or control character cannot be used for Accession No.	The study information in the study file (ccrhis.his) is invalid. Delete the backslash (\) and any control characters.
	23	Character '\ or control character cannot be used for Patient ID.	
	24	Character '\, ' line feed code, or control character cannot be used for Study Description.	The study information in the study file (ccrhis.his) is invalid. Delete the backslash (\), line feed code, and any control characters.
	25	Character '\, '^ or control code cannot be used for Patient Name.	The study information in the study file (ccrhis.his) is invalid. Delete the backslash (\) and any control characters.
	26	Multi-byte character cannot be used for Patient Name.	The study information in the study file (ccrhis.his) is invalid. Delete the multi byte characters.
	29	Character '\, '^ or control code cannot be used for Referring Physician.	The study information in the study file (ccrhis.his) is invalid. Delete the backslash (\) and any control characters.
	39	Out-of-Range Birth Date (A date earlier than 1869 or later than tomorrow is entered.)	The study information in the study file (ccrhis.his) is invalid. Input the correct birth date.
	40	Entered date is invalid for Birth Date.	
	41	A character/characters for Patient ID is/are not supported by Specific Character Set.	The study information in the study file (ccrhis.his) is invalid. Input using the specific character set.
	42	A character/characters for Accession No. is/are not supported by Specific Character Set.	
	43	A character/characters for Patient Name is/are not supported by Specific Character Set.	
	44	Entered characters are not acceptable because they do not match Specific Character Set.	The study information in the study file (ccrhis.his) is invalid. Delete the single-byte Japanese kana characters.
	45	A character/characters for Referring Physician is/are not supported by Specific Character Set.	The study information in the study file (ccrhis.his) is invalid. Input using the specific character set.
	46	A character/characters for Study Description is/are not supported by Specific Character Set.	
52	Folder for study file is not set.	Specify the folder to save the study file (ccrhis.his).	
10050	2	Length value for Accession No. of Input Restrictions is not numeric or is not in the range of 1 to 16.	Set the length limitation of the Accession No. to 16 digits or less.
	3	Character set for Accession No. is not specified.	Specify the input character type.
	6	Length value for Patient ID of Input Restriction is not numeric or is not in the range of 1 to 64.	Set the length limitation of the Patient ID to 64 characters or less.
	7	Character set for Patient ID is not specified.	Specify the input character type.
	10	Character set for Patient Name is not specified.	
	11	Character set for Study Description is not specified.	
	13	Starting Value is not numeric or out of range.	Set the Starting Value using a number in the correct range.
	15	Total length of Starting Value and Accession No. Header String exceeds the limit.	Adjust the length of the header string to set the total length of the starting value and header string within the length limitation.
	16	Counter value is set to 1.	Check the value of the counter.
	17	Header String for Patient ID exceeds the maximum length.	Set the length of the Header string within the length limitation.

Continued on the following page &gt;&gt;

8. Before calling the service technician (Warning)

module id	message id	Message	Detail
10050	18	Character '\ or control character cannot be used for Patient ID.	Delete the backslash (\) and any control characters.
	19	A character/characters for Patient ID is/are not supported by Acceptable Character Set or Specific Character Set.	Input using the designated input character type or specific character set.
	20	Header String for Accession No. exceeds the maximum length.	Set the length of the Header string within the length limitation.
	21	Character '\ or control character cannot be used for Accession No..	Delete the backslash (\) and any control characters.
	22	A character/characters for Accession No. is/are not supported by Acceptable Character Set or Specific Character Set.	Enter using the designated input character type or specific character set.
	23	Header String for Study Description exceeds the maximum length.	Set the length of the Header string within the length limitation.
	24	Character '\ or control character cannot be used for Study Description.	Delete the backslash (\) and any control characters.
	25	A character/characters for Study Description is/are not supported by Acceptable Character Set or Specific Character Set.	Enter using the designated input character type or specific character set.
	26	Patient/Study Info. Setting Error	Set again the Patient/Study Info. based on the information displayed in [Details].
	29	Reset the maximum Length and Header string for Accession No. so that Counter value will be two digits or more.	Refer to the message details, and set the Accession No.
10053	1000	This type of a magnetic card/bar code reader cannot use Connection Check function.	Check the magnetic card/barcode reader settings.
10063	1001	Enter essential data. [item]	Input the required item that is displayed.
	1002	Enter in numeric. [item]	Input the displayed item in single-byte alphanumeric characters.
	1003	Entered value exceeds the limit. [item (** - **)]	Input the displayed item within the limitation.
	1004	Entered value could not be checked.	Check the input value in the JPEG Settings screen (see page 70), and set it again if necessary.
	1005	Entered value is not numeric or out of range. [item]	Enter a value within the correct range for the displayed item.
10065	4097	C/D Ratio data will be updated.	Click [OK] to overwrite the C/D ratio data. To cancel overwriting, click [Cancel].

## 8.4 Information

module id	message id	Message	Detail
10002	10100	Connection to the specified EOS is successfully established.	Click [OK].
10003	105	No Untransferred Study	
10004	31	Free Space in Storage Directory [** GB]	
10027	1109	Association with Storage Server succeeded.	
10044	8	Association with MPPS Server succeeded.	
10045	6	Association with Worklist Server succeeded.	
10051	1	No item can be set.	
10053	10000	Connection to the magnetic card/bar code reader is successfully established.	



# Index

---

## Symbols

<- -> 58

## A

Acceptable Character Set 84  
Accession No. 10, 11, 14, 17  
AE Title 74  
Area 55  
Area C/D ratio 56  
Area Ratio 55  
Automatic Accession No. Assignment 85

## B

Birth Date 11, 14  
Birth Date Input 83, 86  
Brightness 60, 65  
By Time 45

## C

C/D ratio 54  
COM Port 77  
Compare Studies 52  
Contrast 60, 65  
Contrast/Brightness 50  
Coordinate Hues 65  
Counter 85  
Cup 56

## D

Delete the Dot 56  
DICOM Tag Keyword 90  
Disc 55  
Display Magnification 59  
Display size 106, 107, 108  
Display warning when available drive size is less than 80  
Display Worklist Search window 90  
Draw cursor 55

## E

Easy-PhotoPrint EX screen 64  
Essential Data 83, 86  
Ethnic Group 11  
Export 92

## F

Filler Character 84  
First Name 11  
Form a Shape 56

## G

Gamma 60, 65  
Grayscale Conversion 79

## H

Hand 54  
Horizontal 55  
Horizontal C/D ratio 56  
Host Name 88, 91, 93  
Hue 60, 65

## I

Image comments 46, 98  
Image Compression 93  
Image Format 79  
Image Property 46  
Image Quality 79  
Image Size 79  
Image Storage Directory (Folder) 80  
Initial enlargement cursor 55  
Input Format 84  
Input-Disabled Data 83  
Insert the Dot 56  
Institution Name 75  
Institutional Department Name 75  
ISO Speed 79

## L

Last Name 11  
Line 55  
Line ratio 57  
List Input tab 86  
Location 75  
Logging off 29  
Loupe 106

## M

Magnification rate 106  
Main and Thumbnails display 44  
Main, Thumbnails, and Study Information 53  
Manual Input tab 11  
Middle Name 11  
Modality 74, 93  
Move/Apply Effects to Both Images 58

## N

Normal View 42

## O

Order by Content Time 105

## P

Parameter Set 65  
Password 7, 100  
Patient History 12, 15  
Patient ID 10, 11, 14, 17  
Patient Info Edit screen 68  
Patient Name 10, 14, 17  
Photography ready lamp 23  
Port No. 88, 91, 93  
Prefix 11  
Print 109  
Print information 62  
Printing parameters 60  
Privilege 100

## R

Rejected image 26, 67  
RGB Channel 49

## S

Save period 81  
Search screen 32  
Series Instance UID 99  
Server AE Title 88, 91, 93  
Sex 11, 14  
Simple printing 61  
Skip Study Input 22  
SOP Class 74, 93  
SOP Instance UID 99  
Specific Character Set 76  
Station Name 75  
Stereo View 58  
Storage Directory (Folder) 93  
Storage Name 93  
Storage Server 92  
Storage Type 93  
Straight line 57  
Study 11  
Study Description 12, 14, 23  
Study Instance UID 99  
Study log files 31  
Study logs 31  
Study tab 10  
Suffix 11

## T

Temporarily Saved 31  
Thumbnails and Study Information 53  
Thumbnails Only 41, 53  
Transfer 33  
Transfer All 34  
Transfer Error 28  
Transfer Error icon 8  
Transfer icon 8, 31  
Transfer status icon 27, 31  
Turning display of rejected images on and off 45  
Turning display of the study information screen on and off 45  
Two-Row Thumbnails display 44

## U

User ID 7, 100  
User Name 100

## V

Version information 72  
Vertical 55  
Vertical C/D ratio 56  
Vertical line 57

## W

Worklist 19  
Worklist Search Interval 90  
Worklist tab 19

## Z

Zoom In 48  
Zoom Out 48







# Canon



**CANON INC. Medical Equipment Group**

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan  
Telephone: (81)-3-3758-2111

**CANON U.S.A., INC.**

**CANON MEDICAL SYSTEMS Eye Care Systems Department**

15975 Alton Parkway, Irvine, CA 92618, U.S.A.  
Telephone: (1)-949-753-4000



**CANON EUROPA N.V. Medical Products Division**

Bovenkerkerweg 59-61, 1185 XB Amstelveen, The Netherlands  
Telephone: (31)-20-545-8926

**CANON (CHINA) CO., LTD. Medical Equipment Division**

15F. Jinbao Building, No.89 Jinbao Street,  
Dongcheng District, Beijing, 100005, China  
Telephone: (86)-10-8513-9999

**CANON SINGAPORE PTE. LTD. Medical Equipment Department**

1 Harbour Front Avenue, #04-01 Keppel Bay Tower, Singapore 098632  
Telephone: (65)-6799-8888

**CANON AUSTRALIA PTY. LTD. Optical Products Division**

1 Thomas Holt Drive, North Ryde, NSW 2113, Australia  
Telephone: (61)-2-9805-2000